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REDUCING ANTICIPATORY ANXIETY: DOES VALUES-AFFIRMATION
INCREASE SELF-COMPASSION?

by

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Hons. B. A., Wilfrid Laurier University, 2017

THESIS

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the requirements for Master of Arts in Social Psychology

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Abstract

Mindfulness- and acceptance-based interventions for social anxiety incorporate techniques such as self-compassion and values articulations. Self-compassion has been shown to reduce anticipatory anxiety in students with high social anxiety but the impact of values-affirmation has not yet been explored. Additionally, past research suggests that values-affirmation may foster self-compassion. Three studies were conducted to explore whether values-affirmation, too, reduces anticipatory anxiety (related to an upcoming speech task) and to evaluate whether self-compassion is a mechanism of change. In study one, participants ($N = 93$) were randomly assigned to a self-compassion manipulation, a values-affirmation condition, or a control condition. After controlling for baseline differences, there were no significant differences across conditions on anticipatory anxiety. Study two ($N = 121$) compared a standard values-affirmation (in the context of a memorable experience) to the modified values-affirmation (in the context of a mistake) used in study one and determined the values-affirmation used was not representative of a typical values-affirmation manipulation. The purpose of study three ($N = 209$) was to compare a standard values-affirmation manipulation and control group on their levels of anticipatory anxiety related to an upcoming speech task. Participants were preselected for high versus low social anxiety to compare these groups. The results showed that self-affirmation reduced anticipatory anxiety for those with low social anxiety only, and this effect was mediated by state self-compassion. This research further supports the self-compassion account of self-affirmation (Lindsay & Creswell, 2014) and adds to the literature showing that individual vulnerability differences can serve as a significant moderator of self-affirmation effects.

Keywords: Self-Compassion • Social Anxiety • Mindfulness-Based Therapy
• Self-Affirmation Theory • Anticipatory Anxiety

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Reducing Anticipatory Anxiety: Does Values-affirmation Increase Self-Compassion

Social anxiety disorder (SAD) is a common and persistent anxiety disorder (Beedso-Baum et al., 2012; Baxter et al., 2013; Kessler et al., 2012) associated with many problematic outcomes (Beesdo et al., 2007; Mullaney & Trippet, 1979, Liebowitz et al., 1985). Mindfulness and acceptance-based interventions (MABI) show growing support for treating people with SAD (Stefan et al., 2018; Norton et al., 2015; Dalrymple & Herbert, 2007; Kocovski et al., 2013), and have been suggested as an alternative treatment option for anxiety disorders (see Keng et al., 2011 for review; Eifert & Forsyth, 2005; Eifert et al., 2009). Rather than trying to alter negative cognitions and emotions directly as in traditional cognitive behavioural interventions, MABIs place an emphasis on encouraging behavioral shifts in the face of cognitive or emotional distress (Herbert et al., 2014).

The current research focuses on two techniques from within the mindfulness- and acceptance-based camp that may be helpful for the treatment of SAD: 1) self-compassion (SC), which is derived from Buddhism and mindfulness, and 2) values articulation, which will be represented through a values-affirmation task borrowed from the self-affirmation literature. Inducing self-compassion has been found to effectively reduce anticipatory anxiety for those with high social anxiety (Harwood & Kocovski, 2017). The main purpose of the current research was to determine whether, like self-compassion, values-affirmation is effective in reducing anticipatory anxiety, and whether self-compassion plays a mediating role, such that values-affirmation increases self-compassion, which in turn decreases anticipatory anxiety.

Social Anxiety

Social anxiety disorder (SAD), formerly known as social phobia, is recognized by the DSM-5 (American Psychiatric Association [APA], 2013) as fear and avoidance of social situations due to possible negative evaluation from others. It is characterized by persistent and irrational fears of being judged by others, specifically in three circumstances: public speaking or performances (typically the most distressing), social interactions (e.g. speaking with a stranger), and being observed in public (e.g. eating).

Cognitive models of SAD (Clark & Wells, 1995) connect social anxiety with three key attributes: 1) a tendency to focus on negative social information (i.e. criticism), 2) perfectionistic standards in social performance settings, and 3) a high degree of public self-consciousness. Not only do individuals with SAD interpret neutral social events as negative and indicative of their shortcomings, but they also have a memory bias in favor of this interpretation bias (Hertel et al., 2008; Brozovich & Heimberg, 2008). Overall, people with SAD have a biased tendency to recall emotionally negative events.

People with SAD are markedly self-conscious in public settings and preoccupied with a need to appear perfect and have flawless interactions (Flett et al., 2012). When they are treated negatively by others, this memory consumes their thoughts (Nepon et al., 2011). Importantly, people with high levels of social anxiety are also known to be more self-critical (Cox et al., 2002), which has been found to be a predictor of poorer response to CBT (Rector et al., 2000). In fact, the fundamental main thematic fear in SAD is that “the self is deficient” (Moscovitch, 2009). Individuals with high social anxiety attach less importance to their positive characteristics (Moscovitch et al., 2009) and have a more negative self-view, even when they have performed objectively well in a given social situation (Alden & Wallace, 1995). Cox et al. (2004) found self-criticism to be significantly

associated with lifetime occurrence of social anxiety disorder, even after controlling for current levels of emotional distress, mood, anxiety, substance use disorders, depression, and trait levels of neuroticism. Their study was conducted with clinical samples, characterized by demoralization, distress and perceived need for help; however, they determined that the presence of social anxiety disorder *alone* was enough to account for the heightened levels of self-criticism that were observed. In line with this, people with social anxiety disorder have also been shown to display higher scores in fear of self-compassion and of receiving compassion compared to a control group (Merrit & Purdon, 2020).

Data from Ontario's *Mental Health Supplement* study found that SAD was connected to clear dissatisfaction and low functioning in terms of quality of life (Stein & Kean, 2000). It is also associated with dropping out of school (Stein & Kean, 2000), and with an increased risk of depressive disorders, substance-use disorders, and cardiovascular disease (Ruscio et al., 2008; Kessler, 2003). There are high comorbidity rates with other mental disorders in general, ranging between 69% and 99% (Chartier et al., 2003; Leichsenring et al., 2003; Schneier et al., 1992). People with SAD have lower positive functioning (Weeks & Heimberg, 2012), experience fewer positive emotions, less meaning in life, and lower self-esteem (Kashdan & McKnight, 2013). They perceive themselves to face more difficulties and failures and report lower intrinsic motivation in working toward their purpose (Kashdan & McKnight, 2013).

Importantly, SAD is associated with a lowered tendency to seek help (Ruscio et al., 2008; Kessler, 2003; Keller, 2003; Beesdo et al., 2007). According to a study done by Ranta et al. (2009), only 1 in 5 adolescents with SAD had sought out help from a mental health professional. Other studies have reported numbers as low as 5% of people with SAD

seeking adequate help (Weiller et al., 1996). Naturally, social anxiety hinders help-seeking behaviours from those with SAD as they likely experience heightened concerns about social evaluation from both healthcare professionals, and peers. Clark (2001) has noted that a key issue for those with SAD is an excessive internal self-focus which magnifies their belief that others will reject them if they were to not behave properly. When people with SAD do seek out therapy, a notable barrier is client motivation. McAleavey et al. (2014) found that 60.5% of clinicians agreed that when client motivation was lower at the start of therapy, they were less likely to thrive through cognitive behavioral therapy (CBT). CBT is the typical treatment for SAD (Kaczurzin, 2015); however, after incorporating high drop-out rates (about 10-20%), about half of patients show minimal, if any, response to treatment (Eskildsen et al., 2010) and most continue to experience lingering symptoms after CBT (Rodebaugh et al, 2004; Dalrymple & Herbert, 2007). Occasionally, clients in CBT even show worse symptoms (McAleavey et al., 2014).

Perhaps self-help approaches that aim to adjust the way they view themselves (lower self-criticism) as well as manipulate their focus of attention, such as mindful exercises and workbooks (Fleming & Kocovski, 2013), would be a useful tactic to offer strategies for this population. Further, McAleavey et al. (2014) suggest incorporating techniques that would improve client motivation. For example, incorporating values work could help to improve client motivation (Grumet & Fitzpatrick, 2016), as personal values are innately motivating (Bardi & Schwartz, 2003).

Mindfulness and Acceptance Based Interventions

Mindfulness has received significant attention in recent years; in fact, this has been referred to as the “Mindfulness Revolution” and it has been described as being the secret to

happiness (Pickert, 2014). The “third-wave” mindfulness- and acceptance-based interventions emphasize present-focused awareness in which the individual views their current experience(s) with acceptance and compassion, rather than engaging in avoidance, control, or suppression (Hayes, 2004; Williams, 2010). For example, in the context of anxiety disorders, mindfulness- and acceptance-based interventions aim to facilitate observation of symptomatic processes (e.g. increased heartrate or sweaty hands) without overidentifying with said processes and reacting to them in ways that are more destructive than helpful (e.g. avoidance; Roemer et al., 2008). A common example of an exercise used in mindfulness- and acceptance-based interventions is awareness of breathing. The task is to simply focus on the physical sensation of one’s own breath, and if attention drifts to external stimuli or thought, then the task is to redirect one’s focus on breathing once again.

Mindfulness meditation has been incorporated into larger behavioral interventions for those experiencing anxiety disorders and shows promising results, with people having lower levels of anxiety symptoms as well as higher quality of life (Chen et al., 2012; Khoury et al., 2013; Serpa et al., 2014). Mindfulness- and acceptance-based interventions also show promising results for treating people with SAD (Goldin et al., 2009; Bogels et al., 2006), and acceptance and commitment therapy, a type of mindfulness- and acceptance-based intervention, has been found to be equally effective as CBT in both group and individual settings (Kocovski et al., 2013; Craske et al., 2014). These therapies emphasize the acceptance of internal experiences, as well as values articulation and values-consistent action (Hayes et al., 2012).

Acceptance and commitment therapy (ACT), a type of MABI, focuses on psychological flexibility, defined as “the ability to contact the present moment more fully

as a conscious human being, and to either change or persist when doing so serves valued ends” (Hayes et al., 2004, p. 5). There are six processes involved in psychological flexibility: 1) acceptance (willingness to have private internal experiences, as opposed to avoiding one’s thoughts and feelings); 2) cognitive defusion (not allowing literal language to dominate the direct experience, as opposed to being “fused” to a certain thought or belief, such as “I am a failure”); 3) contact with the present moment (maintaining awareness and focus on the current moment, as opposed to ruminating on the past or worrying about the future); 4) self-as-context (maintaining a flexible view of one’s self based on the context); 5) values (awareness of things that are important to you and that help direct your actions) and 6) committed action (similar to values; involves the articulation of firm behaviors that will help to move an individual toward their values, as opposed to inaction, impulsivity or avoidance), all of which are believed to initiate change during treatment (Ruiz, 2012). Along with acceptance, values are leaned on heavily in acceptance and commitment therapy.

Although CBT is the ‘gold standard’ for treating anxiety disorders, mindfulness- and acceptance-based therapies offer a promising alternative treatment option for some people. Studies on acceptance and commitment therapy have shown growing evidence for treating a wide range of psychological issues, including anxiety disorders (Craske et al., 2014; Swain et al., 2013; Ruiz, 2010 for review). Open trials investigating ACT in both individual and group settings for SAD have shown significant improvement in social anxiety symptoms and quality of life (Dalrymple & Herbert, 2007) and significant decreases in experiential avoidance (Ossman et al., 2006). Internet-delivered ACT

programs have even shown to be effective in reducing social anxiety symptoms (Ivanova et al., 2016).

Although there is growing empirical support for mindfulness- and acceptance-based therapies, they are not always effective, especially when one is specifically looking to minimize one's symptoms of anxiety (Strauss et al., 2014). Acceptance and commitment therapy (ACT) suggests that forming a connection with personal values can motivate people *intrinsically* to build mindfulness-skills (Hayes et al., 2012; Hayes et al., 2011). ACT has a core process of "committed action", requiring engagement in activities that align with personal values. There is supporting evidence for the values component in ACT benefitting people experiencing anxiety disorders, showing it to be helpful in lowering psychological distress and enhancing well-being and quality of life (Michelson et al., 2011). Michelson et al. had participants with generalized anxiety disorder (GAD) undergo acceptance-based behavioural therapy (ABBT), during which they were encouraged to discuss the values that are central to them and to think about how anxiety and avoidance behaviours have impeded values consistent living. The researchers determined that ABBT lead to significant increases in valued living. Research on values, such as that done by Michelson et al., typically looks at the effect of values articulation on values-consistent activities. It is not clear, however, whether values clarification tasks have a significant impact (e.g., West et al., 2013; Berghoff et al., 2017) outside of value-related behaviors (Karremans, 2007; Sheldon & Houser-Marko, 2001). This was considered in the current studies, by borrowing a values-affirmation task from the self-affirmation literature to explore whether writing about an important value reduces anticipatory anxiety towards an unrelated upcoming speech task.

Values

In acceptance and commitment therapy, values are defined as “...verbally-constructed, globally-desired life directions” (Hayes et al., 2001, p. 235). Unlike goals, values have no ‘end’; they help guide behavior in an ongoing process. They are meant to orient people toward purposeful actions, even when they are experiencing negative emotions (Hayes et al., 2012). Identifying values in therapy has been found to increase values-oriented behaviors (Yadavia & Hayes, 2009; Chase et al., 2013, Paez-Blarrina et al., 2008). There is also literature from other areas of psychology showing that identifying and exploring one’s personal values has the ability to alter behavior and attitude (Epton et al., 2014; Freijy & Kothe, 2013; Harris & Epton, 2009; Lehmiller et al., 2010).

A technique used in acceptance-based behavioural therapies is a values articulation, in which clients are encouraged to bring important values to the forefront of their mind when approaching challenging situations, rather than focusing on their anxiety related to the situation. Values clarification tasks provide a source of inspiration and life purpose (Hayes & Duckworth, 2006), and aim to motivate behavior and encourage acceptance in the presence of painful emotions and experiences (Hayes et al., 1999). A lack of values clarity can impede value-guided living and is related to a variety of negative outcomes, including suicidal ideation, experiential avoidance, general psychological distress, and anxiety (Bahraini et al., 2013; Wilson et al., 2010). Values are suggested to offer a more stable “compass reading” than internal experiences (Hayes et al., 1999) when guiding behavior in personally relevant domains. For example, consider a situation in which somebody with high social anxiety is deciding whether to give a presentation. It may be more beneficial to consider one’s values about learning and education or personal growth

and development, than to base one's decision on the anxious feelings (internal experiences) that arise from the thought of presenting.

Written values clarification tasks (also known as self-affirmation tasks) have been shown to promote the elaboration and expression of values-consistent behaviours (Maio et al., 2001; Sagiv et al., 2011) and help people regulate negative cognitive and affective responses (Cohen et al., 2007). Researchers speculate that values articulations may work to lower the impact of distress, as it becomes less important than pursuing valued action; for example, people have been found more willing to experience pain following a values articulation that connected pain to a valued action (Paez-Blarrina et al., 2008). Several studies show support that value-guided action increases behavioural flexibility, helping people to better endure aversive situations (Branstetter-rost et al., 2009; Ciarrochi et al., 2011; Gutierrez et al., 2004). This speaks to why values articulations, in which people focus on their values rather than negative internal experiences (anxiety), are a helpful addition to therapy for those experiencing social anxiety. Problems in value clarity, on the other hand, are related to negative outcomes, including experiential avoidance, general psychological distress, and anxiety (Bahraini et al., 2013; Wilson et al., 2010).

In social psychology, values-affirmation is a means of self-affirmation that serves a protective function when one is faced with a threat (McQueen & Klein, 2006). Most of the research has focused on the impact of values-affirmation on social psychological areas such as bias (e.g., affirming core values reduces self-serving bias; Sherman & Kim, 2005); the influence on distress and psychological functioning requires further clarity. Creswell et al. (2005) examined whether a values-affirmation would minimize psychological stress linked to an interpersonal challenge and determined that self-affirmation buffers against stress

reactivity to social evaluation. In contrast, although Czech et al. (2011) did find that people who lived a life consistent with their values had less anxiety towards a stress task, they also found that a values-affirmation exercise did not reduce anticipatory or post-task anxiety. Perhaps a values-affirmation task would be specifically effective for those who have the most to gain from it, similar to self-compassion.

Self-Affirmation

“Self-affirmation is the active affirmation of some important aspect of one’s self-concept” (McQueen & Klein, 2006, p.300). The notion that people are motivated to maintain self-integrity is central to self-affirmation theory; this corresponds to the image of oneself as able to control important adaptive and moral outcomes in one’s life. Threats to this evoke psychological threat; however, when people affirm their general self-integrity, defensiveness diminishes (Sherman & Cohen, 2006).

Self-affirmation has shown to have a wide range of benefits; for example, it reduces various forms of threat (Sherman & Cohen, 2006; Cohen & Sherman, 2014), reduces negative consequences of chronic stress (Cohen et al., 2006; Creswell et al. 2013), helps instill confidence in one’s ability to reach one’s goals (Zhao & Nan, 2010), and buffers against physiological stress responding (Creswell et al., 2005). It also helps people to recognize their vulnerabilities and appreciate that bad things may happen (Klein et al., 2011; Sherman & Cohen, 2006; Tesser, 2000). Generally, people focus their attention to threats (Pratto & John, 1991). When self-affirmed, people can perceive daily stressors in the context of the bigger picture (i.e. using higher mental construal; Schmeichel & Vohs, 2009; Wakslak & Trope, 2009), thus having less effect on one’s psychological state (Sherman et al., 2013). Self-affirmation can help people to see that they have integrity and

that regardless of any difficulties or stressors they may face, life overall is okay. For example, when self-affirmed participants (those who had wrote about an important value) were required to do a spontaneous speech task with social evaluation, they no longer showed signs of elevated cortisol (Creswell et al., 2005). This finding may have been a result of viewing the stressor in a larger picture of “things that truly matter for my adequacy” (Creswell et al., 2005). Interestingly, affirmations nurture an *approach* orientation to threat, as opposed to avoidance from threat, with self-affirmed participants reporting a threatening domain as more important to them compared to non-affirmed participants (Cohen et al., 2007).

Stress often arises from events that call into question people’s sense of adaptive adequacy – how well they perceive themselves as able to meet life’s demands and control personal outcomes (Sherman & Cohen, 2006). Therefore, affirming one’s values could buffer against stress by allowing one to attach one’s sense of adequacy in an alternative domain where it is not in question. Self-affirmed individuals are found to narrate adversity in a way that maintains self-adequacy and aids in their adaptive engagement with threats (Cohen et al., 2009; Cook et al., 2012). Just as self-compassion inductions are most effective for those who have the most to gain from them (Harwood & Kocovski, 2017; Leary et al., 2007), people who benefit most from implementing self-affirming narratives to daily stressors are those with the greatest number of daily hassles (Keough & Markus, 1998); for example, perhaps somebody with high levels of social anxiety.

Self-Affirmation Mechanism of Effect

The mechanism of effect behind self-affirmation remains open for debate (McQueen & Klein, 2006; Sherman & Cohen, 2006). There are currently two main

theoretical perspectives pertaining to how self-affirmation exerts its effects. The first is the self-resources account (i.e. raising self-esteem and self-regulatory strength; Shmeichel & Vohs, 2009; Sherman & Hartson, 2011), which states that self-affirmation boosts one's self-image for coping with self-threats (Sherman & Cohen, 2006). Though, self-affirmation researchers contend that self-affirmation should not merely be equated with bolstering people's self-esteem (e.g., McQueen & Klein, 2006). The second is the transcending-self account, in which self-affirmation facilitates one's transcending self-image concerns by increasing other-directed feelings. For example, Crocker et al. (2008) compared a values-affirmation condition with a control condition on 18 affective states. The values-affirmation condition was significantly higher in 12 of the items (love, joyful, giving, empathic, connected, sympathy, grateful, proud, content, clear, vulnerable, critical, humble). Further, they found that out of the 18 measures, the feelings 'loving' and 'connected' were the *only* ones that explained the effect of a values-affirmation on acceptance of threatening health information. Recently, a novel *self-compassion account* of self-affirmation, which offers a combination of the self-resources and transcending-self perspectives, was proposed by Lindsay and Creswell (2014), in part inspiring this study. The self-compassion account is discussed in more detail later.

There are two common types of self-affirmation manipulations: 1) value affirmations and 2) attribute affirmations. In value affirmations, one affirms oneself by highlighting values that are personally important (e.g., Cohen et al., 2007); in attribute affirmations, one affirms oneself by highlighting one's characteristics (e.g., Cohen et al., 2000). To affirm the self, an event does not need to foster a feeling of overall excellence; rather, it must merely promote a sense of adequacy within one's personal value (Cohen &

Sherman, 2014). Personal values have been described as the internalized standards one uses for self-evaluation (Rokeach, 1973). Often, people affirm themselves through writing about their connections to others (Shnabel et al., 2013) and to purposes that extend beyond their own person (Crocker et al., 2008).

Likely the most popular technique (McQueen & Klein, 2006) used within self-affirmation studies is the values-affirmation. In this exercise, participants are asked to rank a set of values from most to least important (e.g. friends and family, learning and education, religion and spirituality, etc.) and then write about their top ranked value. They are asked to discuss why that value is important to them, or how they have tried to live up to that value in the past. To compare, a control condition typically discusses an unimportant value and writes about why it may be important to others (Crocker et al., 2008).

Self-Compassion

Self-compassion (SC) originated in Buddhist thought, which places an emphasis on truly knowing and understanding the nature of oneself. There are three interrelated aspects of SC, each with a dichotomous construct: 1) *self-kindness* during trying times, such as failure, rather than being self-critical; 2) *common humanity* and viewing oneself as part of the larger human experience, as opposed to viewing oneself in isolation or alone in their suffering; and 3) *mindfulness*, in which one views both good and bad personal experiences and feelings in balance and with mindful awareness, rather than over-identifying with negative affect (Neff, 2003a).

Research with healthy individuals has consistently established the benefits of SC showing that it promotes many adaptive qualities including life satisfaction, resilience and

wellness, emotional intelligence, self-determination and perceived competence (Neff, 2003a), goal mastery and self-improvement motivation, intrinsic interest (Neff et al., 2005), personal initiative and making changes required for a more productive and fulfilling life (Neff et al., 2007), learning-approach goal orientation (Akin, 2008), adaptive coping, as opposed to avoidance (Costa & Pinto-Gouveia, 2013), a greater ability to cope with negative emotions and negative feedback (Neff et al., 2007; Heffernan et al., 2010; Waring & Kelly, 2019), use of first person plural pronouns (“we”; Barnard & Curry, 2011), social connectedness (Akin & Akin, 2015), and emotional balance (Leary et al., 2007). Research has also determined SC to be negatively associated with various detrimental affective states including anxiety, depression, self-criticism, self-judgment, rumination, and perfectionism (Neff, 2003a; Neff & Vonk, 2009; Dundas et al., 2017), anxiety level after considering weaknesses (Neff et al., 2007), self-referring words (“I”), fear of failure (Neff et al., 2005; Neff et al., 2018), and post-traumatic stress and panic following traumatic events (Zeller et al., 2014). SC theory posits that the psychological security required to reduce defensiveness in face of threat can be increased without needing to raise self-esteem or bolster self-image (Leary et al., 2007). SC helps to reduce the anxiety that comes with the self-criticism following negative events, so that one no longer needs to defend against it (Neff et al., 2007).

A commonly used technique for manipulating SC is a writing exercise in which individuals discuss a negative life event, whether it be in one’s personal life, work life or social life. They are directed to write about an event that made them feel particularly bad about themselves, as SC has been found to be most relevant in times of shame and self-criticism (Neff, 2003b). Participants receive three prompts, each relating to one of the

three components of SC. The self-kindness prompt urges them to express concern and understanding to themselves, in such a way they might express concern for a friend in the same situation; the common humanity prompt asks them to list ways in which others may have had similar experiences; the mindfulness prompt encourages their detailing of the events and feelings to be as balanced as possible. Using this technique, Breines and Chen (2012) found that inducing SC increased the belief that shortcomings can be changed, the desire to make amends, effort put forth studying for a test following failure, and motivation to improve a personal weakness. In their study, SC influenced people to engage in positive responses following negative events.

Arch et al. (2014) determined that people who underwent a SC manipulation consisting of *metta* (loving-kindness) meditation showed an increase in levels of SC relative to a control group. Additionally, these individuals displayed lower levels of salivary alpha amylase (sAA) following the Trier Social Stress Test (TSST; Kudielka et al., 2007), signifying an inhibited sympathetic system response, which has been connected to lower defensiveness (Arch et al., 2014). A decrease in levels of sAA following a SC induction demonstrates individual's lower levels of anxiety in response to a socially threatening situation (the TSST). This study reveals that SC training produces greater effects beyond increasing one's level of SC. They went beyond correlational research, providing support for the idea that SC may have a more instrumental relationship among certain psychological states, such as anxiety.

Individuals with high social anxiety tend to engage in extreme post-event processing (Brozovich & Heimberg, 2008; Helbig-Lang et al., 2016), something SC has been shown to effectively reduce. Blackie and Kocovski (2017) found that among

participants with high social anxiety, a SC induction following a speech task led to lower post-event processing the next day and increased participants' willingness to engage in future social situations.

Arch et al. (2018) compared a SC induction among a clinical sample of people with social anxiety disorder (SAD) to a healthy control (HC) group. Given that people with SAD engage in post-event processing they were interested in determining whether SC was helpful in recovery from social stressors. Participants were put through two social stressors (a speech task, and self-evaluation and feedback task) before completing a written SC induction. Their findings showed that individuals with SAD displayed greater increases in state SC and greater decreases in state anxiety following the induction relative to the HC group. Similarly, SC has been found to be an effective strategy for those with high levels of social anxiety, compared to those with low social anxiety (Harwood & Kocovski, 2017), in reducing anticipatory anxiety towards a social speech task. It seems as though SC has an important role in reducing anxiety, especially among those who need it the most.

Sure enough, research has found that SC inductions are more effective for those who are initially low in SC (Arch et al., 2014). For example, Leary et al. (2007) showed that low self-compassionate individuals who underwent a SC induction showed an increase in perception of similarity to others, while those high in SC were not influenced by the SC induction. In the same study, Leary et al. also found that SC served as a buffer against negative emotions when people engaged in an event involving undesirable self-evaluation. Moreover, participants who underwent the SC manipulation attributed the negative event to "the kind of person [they] are" to a *greater* degree than the control group. The control group showed a positive correlation between taking responsibility and experiencing

negative emotions; this correlation was not present for those in the SC condition. This study demonstrates that those who receive SC training are less defensive (as depicted by increased accepting of responsibility) and show lower levels of distress (as depicted by no correlation between taking responsibility and later negative emotions) compared to a control group.

Self-Affirmation and Self-Compassion

As previously mentioned, the fundamental main thematic fear in social anxiety disorder is that “the self is deficient” (Moscovitch, 2009), noting that people with social anxiety are highly self-critical. Mindfulness-based approaches (such as self-compassion) and self-affirmation are both constructs that address patterns of self-criticism (Creswell et al., 2007; Lannin et al., 2018), both of which have also been proposed as possible mechanisms through which expressive writing works. Mindfulness involves accepting one’s inner experiences, consequently increasing cognitive flexibility and decreasing unwanted thought patterns such as self-criticism (Baer et al., 2006). Self-affirmation interventions address negative thought patterns (such as self-criticism) in a different way – through reminding oneself of valued personal aspects (attributes or values) in order to protect self-worth (Sherman & Cohen, 2006). This is associated with decreased stress and increased well-being (Creswell et al., 2007), as well as intentions of reducing self-criticism (Bucchianeri & Corning, 2012).

Recall that there are currently two theoretical perspectives on self-affirmation – the self-resources perspective, and the transcending-self perspective. Lindsay and Creswell (2014) proposed a novel *self-compassion perspective* of self-affirmation that connected the self-resources account and the transcending-self account for a more complete explanation

of self-affirmation. According to the self-compassion perspective, self-affirmation boosts one's self-image by raising self-directed feelings of sympathy and love, and lowering feelings of vulnerability and criticism (Neff, 2003a; Leary et al., 2007); therefore, increasing self-compassion is one form of boosting one's self-image (self-resources perspective). It is also associated with increased feelings of love and connection (the self-transcendence perspective; Neff, 2003a; Crocker et al., 2008). They propose, however, that the self-image boost is about feeling more *compassion* toward the self (rather than the common *self-esteem* boost that is suggested; Neff & Vonk, 2009) and that these compassionate feelings generated by self-affirmation are *not* other-directed (as proposed by the self-transcendence perspective).

Lindsay and Creswell's (2014) study showed self-affirmation to increase self-compassionate feelings, and that these feelings promote pro-social behaviors. They found support for the compassionate feelings being self-directed, specifically. Moreover, self-affirmation enhanced feelings of self-compassion greater among those initially low in self-compassion. This is similar to research on self-compassion, which has demonstrated self-compassion training to be more effective among those initially low in self-compassion (Leary et al., 2007). The effect of self-affirmation writing on self-compassion may also explain why studies on self-affirmation struggle to provide evidence that the mechanism of change is simply state self-esteem or positive mood (Schmeichel & Martens, 2005; Sherman & Cohen, 2006; McQueen & Klein, 2006). Lindsay and Creswell acknowledge the need for research to clarify how self-compassion and self-affirmation processes are entangled.

Both self-affirmation and self-compassion are social tactics that touch on your relation to others: self-compassion through the idea of a common humanity and self-affirmation through relating to an important value in such a way that makes you feel connected to others or to being a significant member of a society. Research suggests that values-affirmation effects may be driven by tendencies to write about why their important value makes them feel connected to others (Shnabel et al., 2013). Perhaps it is the feeling of common humanity and connecting the self to others, compassionately, that aids to buffer against self-threatening events and negative emotions.

Further, Stefan (2019) found that approach coping strategies in general increased self-compassion, which in turn assisted in reducing social anxiety; avoidance coping had the opposite effect. As mentioned earlier, affirmations nurture an approach orientation to threat as opposed to avoidance from threat. For example, self-affirmation assists in the process of acknowledging one's weaknesses and the fact that negative experiences are a part of life; in other words, self-affirmation aids in *acceptance*, which is a noteworthy aspect of approach coping strategies, along with problem solving and seeking support (Stefan, 2019). This further supports the notion that self-affirmation, being an approach coping strategy, may be a means to increase self-compassion.

Present Research

The current research was designed to explore the relationship between self-affirmation and self-compassion within the domain of social anxiety. A values-affirmation task is not only a self-affirmation task, which is noted as an effective tactic for combatting patterns of self-criticism, something central in social anxiety (Creswell et al., 2007; Bucchianeri & Corning, 2012), but it is also a values-based strategy, which has been noted

as an important component to add to behavioural interventions for anxiety disorders (Hayes et al., 2012). Therefore, the current research sought to determine whether a values-affirmation would be effective in reducing anticipatory anxiety for those with high levels of social anxiety. Whereas Lindsay and Creswell (2014) focused on increasing prosocial behaviour, this study is focusing on decreasing psychological distress, thus enhancing our understanding of these two approaches as therapeutic techniques to be utilized within mindfulness- and acceptance-based interventions. The goal of the present research was to determine whether self-affirmation is effective in reducing anticipatory anxiety. Further, the present research aims to further explore the self-compassion account of self-affirmation. The main hypothesis is that self-affirmation will reduce anticipatory anxiety towards a speech task by increasing participants' levels of state self-compassion.

Three studies were conducted to investigate whether self-affirmation led to reduced levels of anticipatory anxiety, and whether this effect was mediated by an increase in state self-compassion. Study one compared the effects of a self-affirmation, self-compassion and a control condition on anticipatory anxiety pertaining to an upcoming speech task. Study two compared the modified self-affirmation manipulation used in study one to a standard self-affirmation manipulation. Study three compared a standard self-affirmation condition to a control condition on anticipatory anxiety related to an upcoming speech task and investigated state self-compassion as a mediator. Study three also preselected participants with high versus low social anxiety to determine if self-affirmation is more effective for those with high social anxiety than it is for those with low social anxiety, similar to what has been found for self-compassion (Harwood & Kocovski, 2017).

Study One

Study one investigated the difference between a self-compassion condition (SC), a self-affirmation condition, and a control condition in levels of anticipatory anxiety pertaining to an upcoming speech task. It was hypothesized that both SC and self-affirmation groups would have reduced anticipatory anxiety compared to the control group. Further, it was expected that both experimental conditions would lead to increased levels of state self-compassion which in turn would lead to reduced anticipatory anxiety towards the upcoming speech task (see Figure 1).

Method

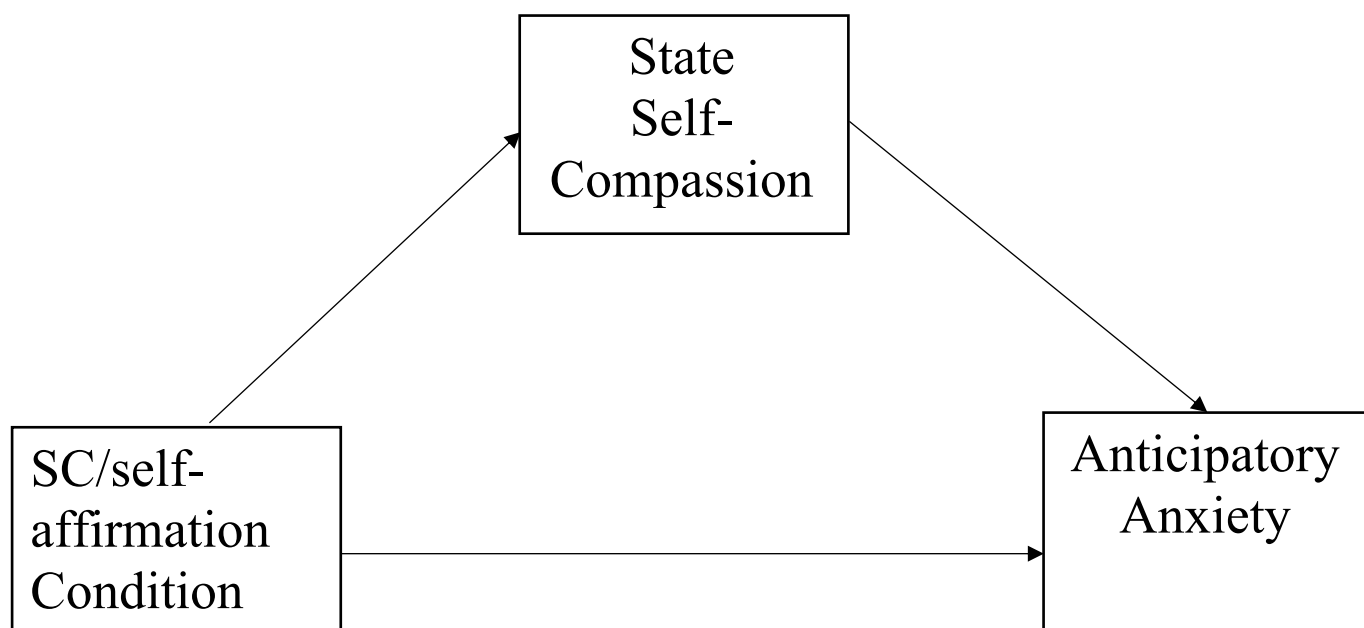
Participants

There were 93 undergraduate students between the ages of 17-25 (mean age=19.07; 62% female; 56% white, 25% Asian, 4% black, 15% other) enrolled in an introductory psychology course at Wilfrid Laurier University that participated in this study. During the debrief, all participants were asked if they were suspicious about whether they would have to give the speech or not. No participants had to be excluded due to suspicion. Participants were randomly assigned to a SC condition ($n=30$), self-affirmation condition ($n=32$), or a control condition ($n=31$). The participants received 1.0 credit towards their course grade for partaking in the study.

Materials

Beck Depression Inventory. The *Beck Depression Inventory* (BDI – II; $\alpha = .91$; Beck, Steer, & Brown 1996) is a 21-item self-rating scale that assesses individual's negative thoughts and feelings during the past two weeks. Each item is rated on a 4-point Likert scale ($0 = not at all feeling \rightarrow 3 = strong feeling$). This revised edition incorporates items to measure severe depressive symptoms that may require hospitalization

Figure 1.

Hypothesized Self-Compassion Mediation Model

(i.e. 0 = “I do not feel I am worthless” \rightarrow 3 = “I feel utterly worthless”). Scores range from 0 to 63, with higher scores signifying higher levels of depression. The BDI has been found to have good reliability regardless of the population ($\alpha = .92$ for outpatients; $\alpha = .93$ for college students), good test-retest reliability at one week ($\alpha = .93$) and has good construct validity (Beck, Steer, & Brown).

Social Phobia Inventory. The *Social Phobia Inventory* (SPIN; Connor et al., 2000) was used as a measure of social anxiety in studies 1 and 2, and as a pre-screen measure of social anxiety in study 3. The SPIN is a 17-item self-rating scale that measures individual’s level of social anxiety over the past week within each of the symptom domains of SAD: fear (e.g., “talking to strangers scares me”); avoidance (e.g., “I avoid speaking to anyone in authority”); and physiological arousal (e.g., “Sweating in front of people causes me distress”). Each item is rated by the participant on a 5-point Likert scale (0 = *not at all* \rightarrow 4 = *extremely*). Scores range from 0 to 68, with higher scores signifying higher levels of social anxiety. The SPIN has been shown to have good test-retest reliability, internal consistency, and validity (Connor et al., 2000).

Social Interaction Anxiety Scale. The *Social Interaction Anxiety Scale* (SIAS; Mattick & Clarke, 1998) was used as a measure of anxiety in studies 1 and 2, and as a pre-screen measure for level of social anxiety in study 3. It is a 20-item self-rating measure on which respondents rate their experiences in social domains associated with social anxiety (e.g., “I find it difficult mixing comfortably with the people I work with”; “I feel I’ll say something embarrassing when talking”). Each item is rated by the participant on a 5-point Likert scale (0 = *not at all true of me* \rightarrow 4 = *extremely true of me*). Possible scores range from 0 to 80, with higher scores representing higher levels of social anxiety. The SIAS has

been shown to be particularly reliable for undergraduate students ($\alpha = .99$) and people with SAD ($\alpha = .93$) and has a strong test-retest reliability ($r = .94$) at four and twelve weeks (Mattick & Clarke, 1998).

Self-Compassion Scale. The *Self-Compassion Scale* (SCS; Neff, 2003a) was used as a baseline measurement of participants' level of SC. The SCS is a 26-item self-rating scale composed of six subscales: self-kindness (e.g., "I try to be loving towards myself when I'm feeling emotional pain"); self-judgment (e.g., "I'm disapproving and judgmental about my own flaws and inadequacies"); common humanity (e.g., "when I feel inadequate in some way I try to remind myself that feelings of inadequacy are shared by most people"); isolation (e.g., "when I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world"); mindfulness (e.g., "when something painful happens I try to take a balanced view of the situation"); and over-identification (e.g., "when something painful happens I tend to blow the incident out of proportion"). Each item is rated by the participant on a 5-point Likert scale ($0 = \text{strongly disagree} \rightarrow 5 = \text{strongly agree}$). The negative subscale items (self-judgment, isolation, and over-identification) are reverse-scored. Total scores were calculated by adding each item; possible scores range from 26-130. The SCS has been shown to have consistently high reliability across various populations (Total scale $\alpha = .91$; all subscale α s $\geq .76$;) and has strong predictive, convergent, and discriminate validity (Neff, 2016).

Self-Esteem. A one-item *self-esteem* scale was used: "I have high self-esteem". Participants responded to this statement on a 7-point scale ($1 = \text{not very true of me} \rightarrow 7 = \text{very true of me}$).

Subjective Units of Distress Scale. The *Subjective Units of Distress Scale* (SUDS; Wolpe, 1969) is a one-item question concerning the level of distress the participant is feeling at that moment, pertaining to their upcoming speech task ($0 = no\ distress \rightarrow 100 = highest\ distress\ possible$). The SUDS has shown to have convergent and discriminant validity, concurrent validity, and predictive validity (Daeho et al., 2008).

State-Trait Anxiety Inventory – State Form. The *Spielberger State-Trait Anxiety Inventory – State Version* (STAI-S; Spielberger et al., 1983) was used to determine the participants' level of state anxiety pertaining to their upcoming speech task. The STAI-S is a 20-item self-rating questionnaire concerning how anxious a participant feels at that current time. A sample question is "I feel strained", which the participant rates on a 4-point scale ($1 = not\ at\ all \rightarrow 4 = very\ much\ so$). Total scores can range from 20-80, with higher scores signifying higher levels of state anxiety. The STAI-S has high internal consistency (ranging from .83 to .92; Kaplan & Smith, 1995), as well as good test-retest reliability. It is used on both clinical and non-clinical groups (Spielberger et al., 1970).

Anticipatory Social Behaviours Questionnaire. The *Anticipatory Social Behaviours Questionnaire* (ASBQ; Hinrichsen and Clark, 2003) is a 12-item measure that examines trait anticipatory processing such as preparing for the social event or imagining worst-case scenarios. The questions were modified to refer to the speech task that participants were required to do in the experiment (e.g., "I made a conscious effort to not think about the speech"; "I reminded myself of things I should not do"). Participants rated their response on a 4-point scale ($1 = never \rightarrow 4 = always$). The ASBQ has high internal consistency ($\alpha=.88$) and good reliability ($\alpha=.87$; Mills et al., 2013).

State Self-Compassion Scale – modified. The state Self-Compassion Scale (S-SCS) was modified from Neff’s SCS – short version (Raes et al., 2011; included in Appendix A as it is a modified scale) to refer to present moment feelings of self-compassion, rather than feeling of self-compassion generally. It is comprised of 12 questions regarding how they feel when they look back on the mistake that they wrote about during the study (e.g., “I am trying to take a balanced view of the situation”; “when thinking about my experience, I am obsessing and fixating on everything that went wrong”). Participants responded on a 5-point scale (*1 = almost never → 5 = almost always*). Unfortunately, no *state* self-compassion scale existed at the time of this study and so a modified measure had to be used (see Appendix A for modified measure).

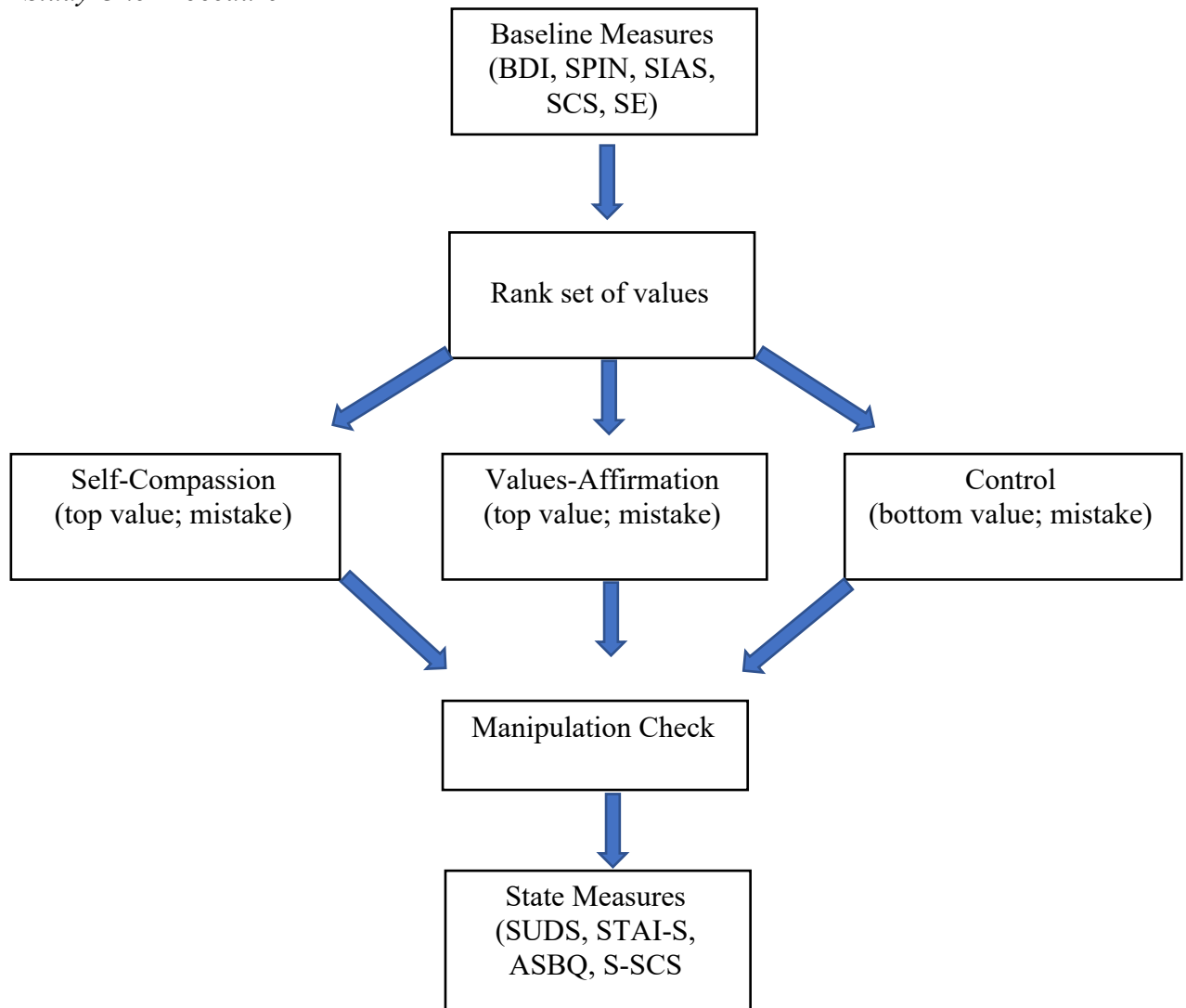
Manipulation check. The manipulation check consisted of four questions that participants responded to on a 7-point Likert scale (*1 = not at all → 7 = extremely*): 1) “how important to you is the value you chose to write about?”; 2) “in general, I try to live up to this value.”; 3) “how self-critical were you when writing about your mistake?”; 4) “to what extent did you write about your mistake compassionately?”

Procedure (see Figure 2)

Participants were told that the purpose of the study was to better understand thought processes surrounding important values. Demographic measures and baseline measures (depression, self-compassion, social anxiety) were administered to ensure that there were no baseline differences between conditions.

Participants were all required to rank a set of 12 values from most (ranked number 1) to least (ranked number 12) important. These values are as follows: artistic skills, sense of humor, relationships with friends/family, spontaneity/living in the moment, social skills,

Figure 2.

Study One Procedure

Note. SUDS = Subjective Units of Distress Scale; STAI-S = State-Trait Anxiety Inventory; ASBQ = Anticipatory Social Behaviours Questionnaire; S-SCS = State Self-Compassion Scale

athletics, musical ability/appreciation, physical attractiveness, creativity, academic skills, romance, religion, other. Participants were then randomly assigned to the SC manipulation ($n=30$), self-affirmation manipulation ($n=32$), or a control condition ($n=31$). See Appendix A for conditions.

Self-compassion manipulation. The self-compassion manipulation was a derivative of that used by Leary et al. (2007); however, it was revised to focus on important values to remain consistent with the self-affirmation condition. Participants were instructed to write about a negative situation that they had previously experienced within a particularly important domain. Discussing a mistake was used as part of the manipulation as Neff (2003b) has noted that self-compassion is most relevant in circumstances that provoke feelings of shame and self-criticism. Specifically, the instructions read: “Consider your top ranked value (the value most important to you). Think about a time when you made a mistake pertaining to this important value.” The participants were provided with three prompts intended to touch on each of the three facets of SC. The self-kindness prompt asked them to “write a paragraph expressing kindness to [themselves] in the same way [they] might express kindness for someone close to [them]”; the common humanity prompt instructed participants to “list some of the ways in which other people have experienced similar events to the one [they] described”; the mindfulness prompt requested participants to “list the emotions [they] felt during this and event and explain (in as balanced a manner as possible) why [they] felt that emotion”.

Self-affirmation manipulation. The self-affirmation manipulation was based on a standard manipulation used in previous research (Lindsay & Creswell, 2014), though it was revised to include writing about a mistake rather than merely a memorable experience in

order to maintain consistency with the SC condition. Participants were also instructed to write about a mistake pertaining to their top ranked value. They were further prompted with four items commonly used in self-affirmation manipulations, although revised to be within the context of writing about a mistake. The prompts were as follows: “briefly state 3 or 4 times in which you made a mistake related to this important value”; “describe the mistake that was most exceptional, influential to you, or important to you”; “explain in full why this value is important”; and “identify your top two reasons why it’s important to you”. Typical values-affirmations ask participants to recall 3 or 4 experiences related to their important value and to discuss why their value is important and how they have lived up to this value in the past. They don’t typically work with mistakes made in the context of important values; however, the goal was to make the conditions as similar as possible.

Control condition. The control condition was intended to account for any effects resulting from writing about a negative event, but without inducing any sense of self-compassion or self-affirmation. Participants received three similar prompts to the SC condition; though, their prompts had no relation to self-compassion. The prompts were as follows: “write a paragraph describing your role in this event”; “who else was involved in this event?”; and “describe your feelings about this event”. The control condition was also meant to control for writing about a value in general. Rather than writing about a mistake in their top ranked value, they wrote about one in their *bottom* ranked value. They were also asked to “Explain in full why this value is important to *others*. Identify the top two reasons you believe this value to be important to others.”

Following the manipulation phase, there was a brief manipulation check regarding how important the value they wrote about was to them. All participants then underwent an

anxiety induction, which was implemented through a three-minute impromptu speech task. Participants were told the following: “This portion of the study examines how people talk about important values. This is an important topic because research has shown that how people discuss important values is correlated with whether they adhere to specific values and live by these values in everyday life.” Participants were told they will be speaking in front of the group (ranging from 1-5 people, depending on how full the research slot is).

Following the anxiety induction, participants were asked to complete the SUDS, the STAI-S, and the ASBQ to determine their current state of anxiety. Lastly, they completed a state self-compassion measure, modified from the SCS scale (Neff, 2003a). Upon completion of these measures, participants were told that they were not actually required to give the speech.

Data Analysis

A multivariate analysis of variance (MANOVA) was conducted to determine any significant effects of the manipulation (SC vs. self-affirmation vs. control) on their state anxiety or state self-compassion (SUDS, STAI-S, ASBQ, and S-SCS). Hayes’s Process (Hayes, 2018; version 3) was used to run mediation analyses to determine whether self-compassion and self-affirmation conditions had higher levels of state self-compassion and whether this reduced anticipatory anxiety.

Results

Baseline Measures

Participants’ social anxiety, depression, self-compassion and self-esteem were measured across conditions (see Table 1). There were no significant differences at the multivariate level, $F(2,90) = 1.40, p = .20$. However, upon closer investigation, univariate

Table 1

Baseline Descriptive Statistics by Condition

	<u>Self-Compassion</u>		<u>Self-Affirmation</u>		<u>Control</u>			
Measure	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (2,89)	<i>p</i>
<i>Social Anxiety</i>								
SPIN	14.17 _a	10.83	20.06	13.91	23.40 _b	15.01	3.67	.03
SIAS	19.70 _a	14.22	24.13	17.28	32.07 _b	16.25	4.61	.01
<i>Self-Compassion</i>								
SCS	83.10 _a	12.93	77.00	16.29	71.27 _b	15.73	4.62	.01
<i>Depression</i>								
BDI	10.37	7.44	13.78	9.26	15.97	11.74	2.58	.08
<i>Self-Esteem</i>								
Single-item Self-Esteem	4.90	1.39	4.56	1.41	4.27	1.39	1.59	.21

Note. SIAS= Social Interaction Anxiety Scale, SPIN = Social Phobia Inventory. BDI = Beck Depression Inventory. SCS = Self-Compassion Scale. SE = Self-Esteem Scale.

analyses revealed significant baseline differences in social anxiety, SIAS: $F(2,90) = 4.61$, $p = .012$ and SPIN: $F(2,90) = 3.67$, $p = .030$, and in self-compassion, SCS; $F(2,90) = 4.62$, $p = .012$. Participants in the control condition had significantly higher scores on the SIAS and the SPIN compared to the SC condition ($p = .012$ and $p = .030$, respectively).

Participants in the control condition had significantly lower levels of self-compassion compared to participants in the SC condition ($p = .009$). These measures were controlled for when conducting future analyses.

Manipulation Check

A manipulation check was conducted to determine how important the chosen value was to the participant, how much they try to live up to that value, and how self-critically and self-compassionately participants wrote about their experiences pertaining to their important value (see Table 2). There were significant differences across conditions in how important they rated their value, $F(2,90) = 33.39$, $p < .001$, how much they try to live up to their value, $F(2,90) = 23.11$, $p < .001$, how self-critical, $F(2,90) = 9.46$, $p < .001$, and how self-compassionate, $F(2,90) = 13.98$, $p < .001$, they were when writing about their experience.

The self-affirmation and SC conditions considered the value they chose to write about as significantly more important compared to the control condition (both $p < .001$); they did not differ from one another in how important the value was to them ($p = .59$). The self-affirmation and SC conditions try to live up to the value more compared to the control condition (both $p < .001$); once again, they did not differ from one another ($p = .96$). The

Table 2

Manipulation Check Items by Condition

Measure	<u>SC</u>		<u>SA</u>		<u>Control</u>		<i>F</i> (2,90)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Importance	6.40 _a	1.28	6.62 _a	.75	3.55 _b	2.46	26.65	.000
Live up to	6.17 _a	1.12	6.19 _a	1.23	3.77 _b	2.23	17.54	.000
Self-critical	4.90 _a	1.47	5.34 _a	0.97	3.84 _b	1.70	7.18	.001
Self-compassion	4.88 _a	1.38	5.31 _a	1.15	3.52 _b	1.63	11.94	.000

Note. SC = self-compassion condition; SA = self-affirmation condition

self-affirmation and SC conditions were significantly more self-critical ($p < .001$ and $p = .004$, respectively) *and* self-compassionate (both $p < .001$), compared to the control condition. They did not differ from one another on either measure ($p = .22$ and $p = .21$, respectively).

Effect of Condition on State Anxiety

A MANCOVA was run using the STAI-S, ASBQ, SUDS and S-SCS as dependent variables. Social anxiety (SIAS and SPIN) and self-compassion (SCS) were entered as covariates due to baseline differences. The MANCOVA showed no significant differences, $F(2, 86) = 0.22, p = .99, \Lambda = .010$.

Four ANCOVAs (see Table 3) were run to look at the effect of condition on the four dependent measures: general distress (SUDS); state anxiety (STAI-S); anticipatory processing (ASBQ); and state self-compassion (S-SCS). Social anxiety (SIAS and SPIN) and self-compassion (SCS) were entered as covariates. After controlling for these baseline measures, there were no significant differences between conditions in general distress, SUDS; $F(2, 86) = .24, p = .79, \eta^2 = .006$, state anxiety, STAI-S; $F(2, 87) = .27, p = .77, \eta^2 = .006$, anticipatory processing, ASBQ; $F(2, 87) = .05, p = .95, \eta^2 = .001$, or state self-compassion, S-SCS; $F(2, 87) = .26, p = .78, \eta^2 = .006$.

Hayes's Process was used to run a moderation analysis (model 1) using 'condition' as the predictor variable, social anxiety (baseline SPIN score) as the moderator, and anxiety as the outcome variable (SUDS, STAI-S, ASBQ) to determine whether either of the experimental conditions, self-affirmation or self-compassion, was more effective for people who score certain levels of social anxiety. The SPIN was used as the moderator as it covers a range of social anxiety, whereas the SIAS focuses on social interaction. This decision is

Table 3

Anticipatory Anxiety and State Self-Compassion by Condition (includes covariates)

Measure	<u>Self-Compassion</u>		<u>Self-Affirmation</u>		<u>Control</u>		<i>df</i>	<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
SUDS	40.79	27.05	51.47	26.13	54.74	24.93	2,86	.24	.79
STAI-S	42.67	12.75	47.84	13.21	51.65	14.38	2,87	.28	.76
ASBQ	27.20	6.07	29.41	8.02	30.39	9.17	2,87	.04	.96
S-SCS	28.67	7.00	25.94	7.65	24.42	6.80	2,87	.27	.76

Note. SUDS= subjective units of distress scale; STAI-S= state-trait anxiety inventory – state; ASBQ= anticipatory social behaviors questionnaire; S-SCS= state self-compassion scale. F and p values are the ANCOVA results.

consistent with other literature, which used the SPIN as the primary measure of social anxiety (Kocovski et al., 2013). Baseline self-compassion was entered as a covariate due to baseline differences between conditions. Neither moderation model using ASBQ or STAI-S as the outcome measures showed significant differences in anticipatory processing or state anxiety between conditions among different levels of the moderator (baseline social anxiety). The moderation model using SUDS as the outcome measure was significant, $F(6, 85) = 9.31, p < .001, R^2 = .40$. For those with low baseline social anxiety: the difference between the control and self-affirmation group was not significant, $b = -7.03, t(85) = -.86, p = .39$; the difference between the control and SC condition was approaching significance, $b = -15.28, t(85) = -1.92, p = .06$. For those with low baseline social anxiety, those in the SC condition had a 15.28 unit decrease in distress compared to the control group. For those with average baseline social anxiety: there was no significant difference between the control group and the self-affirmation condition, $b = -1.34, t(85) = -.25, p = .81$, or the SC condition, $b = -1.01, t(85) = -.17, p = .87$. For those with higher baseline social anxiety: there was no significant difference between the control condition and the self-affirmation condition, $b = 4.34, t(85) = .63, p = .54$, or the SC condition, $b = 13.26, t(85) = 1.40, p = .17$.

A mediation analysis was done to test whether state self-compassion (S-SCS) mediated the effect of condition on anticipatory anxiety (SUDS, STAI-S, ASBQ); baseline differences in social anxiety (SPIN & SIAS) and self-compassion (SCS) were included as covariates. The models were significant; however, once looking closer this significance was just driven by the significant paths of the covariates. None of the other paths were significant.

After controlling for baseline differences in social anxiety and self-compassion, neither the self-affirmation condition nor the SC condition showed significantly different levels on the S-SCS, $t(86) = -.62, p = .24$ and $t(86) = .02, p = .98$, the SUDS, $t(86) = .26, p = .80$ and $t(86) = -.40, p = .69$, the STAI-S, $t(86) = -.18, p = .86$ and $t(86) = -.69, p = .50$, or the ASBQ, $t(86) = .30, p = .77$ and $t(86) = .30, p = .77$, compared to the control condition.

Discussion

It was hypothesized that the self-affirmation and self-compassion (SC) conditions would have lower anticipatory anxiety compared to the control condition. Further, self-compassion was expected to mediate this effect with both experimental conditions having higher state self-compassion compared to the control condition, which would lead to lower anticipatory anxiety.

There were baseline differences between the SC condition and control condition in social anxiety and self-compassion, such that the SC condition had lower baseline levels of social anxiety and higher baseline levels of self-compassion. Once the SPIN, SIAS and SCS were added as covariates there were no significant differences in anticipatory anxiety or state self-compassion between conditions. Inducing self-compassion has been found previously to reduce anticipatory anxiety (Harwood & Kocovski, 2017); however, that study had preselected participants for high versus low social anxiety. They found an interaction effect such that a self-compassion induction led to lower anticipatory anxiety than a control condition for those with high social anxiety, not for those with low social anxiety. Given the present study did not preselect participants based on their trait social anxiety, we were not able to replicate those findings. Perhaps had this study included a

sample of participants with high social anxiety, who were shown to be more receptive to self-compassion training, we may have replicated those results.

Surprisingly, the moderation model actually showed that the self-compassion condition displayed significantly less distress than the control condition for those with *low social anxiety* and had no significant effect on those with high social anxiety. This is opposite to what would be expected based on previous findings (Harwood & Kocovski, 2017). Unlike the previous study, the current study had the personal mistake contextualized within their most important value. This choice was made to maintain consistency with the self-affirmation condition; however, most self-compassion manipulations are not based on mistakes within their most important value. In response to distressing social events, individuals with social anxiety disorder report symptoms such as re-experiencing, avoidance, and hyper-arousal, which are characteristic of those found among people with PTSD (Erwin et al., 2006). It may be that writing about a mistake within the domain of your most important value overrides the beneficial effects of the self-compassion induction for those with high social anxiety, specifically, despite still showing a beneficial effect for those with low social anxiety.

Contrary to our hypotheses, there were no significant differences in anticipatory anxiety between the self-affirmation and control condition. One plausible reason for this may be that the self-affirmation condition was modified to make it more similar to the SC condition, which may have disrupted the authenticity of the self-affirmation condition. Whereas typical values-affirmations have participants write about a top-rated value and discuss how they live up to it, the current study had participants write about their top-rated value in the context of a negative experience – a mistake. The choice to modify the self-

affirmation manipulation to discuss a mistake was made in order to ensure the self-compassion and self-affirmation manipulations were as similar as possible. It is possible that having participants write about mistakes they have made within a personally important value may have a detrimental effect on their psychological state, rather than help buffer against psychological distress (anxiety), as was originally hypothesized. Self-affirmation relates to self-integrity and thinking about a mistake in a personally important value may threaten self-integrity. Although focusing on a mistake may have threatened self-integrity, it still did not lead to higher distress than the control condition, who wrote about a mistake in an unimportant value. In fact, although there were no significant differences, the pattern of results was in line with the hypothesis in that those in the self-affirmation condition showed lower levels of general distress (SUDS) and state anxiety (STAI-S) compared to the control condition.

One final interesting finding to note is the manipulation check showed that participants in the self-affirmation and self-compassion conditions perceived themselves to be more self-compassionate than the control condition when writing about their mistake. The fact that the self-affirmation condition perceived themselves as more self-compassionate may stem from the fact that self-compassion is most relevant during times of shame or self-criticism (Neff, 2003a) and their writing about a mistake may have invoked such feelings, or it may be a result of the self-affirmation component specifically. Participants in the self-affirmation and self-compassion conditions also perceived themselves to be more self-critical than the control condition. This makes sense, given that both of the experimental conditions were instructed to write about a mistake in the context of a personally important value, whereas the control condition wrote about a mistake in a

value that had no significance in their life. It is likely that participants are less self-critical when discussing something that holds no value in their life.

Study Two

The second study was conducted online in an effort to explain the results found in the first study. Specifically, the primary aim was to determine whether the self-affirmation manipulation was a fair representation of self-affirmation. Typically, self-affirmation manipulations require participants to write about positive personal experiences within the domain of an important value (Ferrer et al., 2017; Meier et al., 2015). In study one, participants in the self-affirmation condition wrote about a *negative experience* (a mistake) in order to increase internal validity by keeping the procedure as similar as possible to the self-compassion condition, which typically involves writing about a mistake (Leary et al., 2007; Harwood & Kocovski, 2017). The purpose of this second study was to compare a traditional self-affirmation exercise with one that focuses on a mistake. It was expected that the self-affirmation condition in the context of a mistake would lead to higher distress and more negative affect compared to a standard self-affirmation manipulation.

Although there are mixed results regarding whether self-affirmation directly influences affect (e.g., Harris & Napper, 2005; Weisenfeld et al., 1999), the focus of the current study was to investigate whether there were differences between a standard self-affirmation (SA-standard) condition and a mistake self-affirmation (SA-mistake) condition on 18 affective states following the manipulation phase. General distress was also measured. It was hypothesized that the SA-mistake condition would lead to lower positive affect, higher negative affect, and higher distress compared to the SA-standard and control conditions.

Method

Participants

There were 121 undergraduate students between the ages of 17-25 (average age 19.88; 76% female; 61% White, 17.5% Asian, 7.5% Black, 14% other) enrolled in an introductory psychology course at Wilfrid Laurier University that participated in this study. Participants were randomly assigned to one of three conditions. The first was a standard self-affirmation condition, in which they wrote about a memorable experience in a personally important value ($n=39$). The second was a mistake self-affirmation condition ($n=41$), in which they wrote about a mistake within a personally important domain. The third was a control condition ($n=41$). The participants received credit towards their course grade for partaking in this online study.

Materials

The baseline measures used were the SPIN, SIAS, BDI, SCS and a one-item Self-Esteem scale. The SUDS and modified SCS were used again as dependent measures. The Affective States Measure was also used as a dependent measure.

Affective States Measure. An *Affective States Measure* (borrowed from Crocker et al., 2008) was used to assess general mood. The Affect Scale contains 18 items examining the following feelings: love, joyful, giving, empathic, connected, sympathy, grateful, proud, content, clear, vulnerable, critical, humble, selfish, scared, sad, confused, and angry. Participants rated their response on a 4-point scale ($1 = not at all \rightarrow 4 = very much so$).

State Self-Compassion Scale. The state Self-Compassion Scale (S-SCS) was modified from Neff's SCS – short version (Raes et al., 2011) to assess present moment feelings of self-compassion, rather than feelings of self-compassion generally. Whereas the

modified version in study one specified feelings towards a speech, this version specified feelings towards a past experience.

Manipulation check. The manipulation check consisted of six questions that participants responded to on a 7-point Likert scale ($1 = \text{not at all} \rightarrow 7 = \text{extremely}$): 1) “how important to you is the value you chose to write about?”; 2) “in general, I try to live up to this value.”; 3) “looking back, how self-critical were you when writing about your personal event?”; 4) “to what extent did you write about your personal event compassionately?”; 5) “how positive was the event?”; and 6) “how negative was the event?”

Procedure

Participants were told that the purpose of the study was to better understand thoughts and feelings associated with personally important values. Baseline measures (i.e. social anxiety, depression, self-compassion) were administered to ensure that there were no baseline differences between conditions. Participants were all asked to rank a set of 12 values before being randomly assigned to one of three conditions: 1) standard self-affirmation ($n = 39$); 2) mistake self-affirmation manipulation ($n = 41$); and 3) control ($n = 41$).

Standard self-affirmation manipulation. The self-affirmation (SA-standard) manipulation was a standard technique used in previous work (Ferrer et al., 2017; Meier et al., 2015). Participants were instructed to recall personal experiences pertaining to their top ranked value. They were prompted to describe three or four memorable experiences, to describe the most exceptional or influential experience, and to explain why this value is important to them.

Mistake self-affirmation condition. The mistake self-affirmation condition (SA-mistake) was derived from the standard self-affirmation manipulation; however, it was revised to discuss a mistake rather than just any experience. The prompts were kept as similar as possible to the standard self-affirmation condition, while being made to focus on a mistake. Participants in this condition were prompted to recall three or four mistakes they have made pertaining to their most important value, to describe the most exceptional or influential mistake that they made, and to explain why the value is important to them.

Control condition. The control condition was intended to account for any effects resulting from writing about a value in general and writing about a mistake in general. Rather than writing about a memorable event in their top ranked value, they wrote about a mistake in their *bottom* ranked value. They were asked to “describe 3 or 4 times in which [they] made a mistake related to this value”, to “describe the mistake that was most exception or influential” to them, and to “explain in full why this value is important to others. Identify the top two reasons you believe this value to be important to others.”

Following the manipulation phase, there was a manipulation check regarding how important the value they wrote about was to them, how much they try to live up to that value, how self-critically and how self-compassionately participants wrote about their experience, and how positive or negative their experience that they wrote about was.

Participants were then asked to complete the SUDS to depict the highest level of distress they experienced when writing about their personal experience. They also completed the Affect Scale to determine to what extent they felt each of the 18 feelings when writing about their experience (e.g., love, connected, critical, sad, etc.). Finally, they

completed a state self-compassion scale to determine how self-compassionate they felt in that moment discussing their personal experiences.

Data Analysis

A multivariate analysis of variance (MANOVA) was conducted to determine any significant effects of the manipulation (SA-standard vs. SA-mistake vs. control) on participant distress and state self-compassion (SUDDS, S-SCS) and on their affect (Affect Scale).

Results

Baseline Measures

Participants' social anxiety, depression, self-compassion and self-esteem were measured across conditions (see Table 4). There were no significant baseline differences found on the SIAS, SPIN, SCS, BDI or self-esteem scale (all $F < 1$). Additionally, participants selected similar values across conditions (relationships with friends and family chosen as top value 46-51% of the time).

Manipulation Check

A manipulation check was conducted to determine how important the value they chose to write about was to them, how much they try to live up to their value, how self-critically or self-compassionately they wrote about their personal experience, and how positive and negative the experience that they wrote about was (see Table 5). There were significant differences on all measures (all $p < .01$).

As expected, the control group ranked the value as significantly less important to them and tried to live up to their value significantly less than both the SA-standard and the

Table 4

Baseline Measures by Condition

Measure	<i>M</i>	<u>Control</u>	<u>SA-standard</u>		<u>SA-mistake</u>		<i>F</i> (2,118)	<i>p</i>
		<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Depression	14.95	9.17	16.33	11.58	14.07	10.30	.48	.62
SIAS	29.76	14.66	32.68	14.00	32.68	16.51	.39	.67
SPIN	23.88	13.09	24.36	12.93	26.12	16.82	.27	.76
Self-compassion	75.37	14.37	74.62	20.09	79.32	13.46	.99	.38
Self-esteem	4.22	1.17	4.18	1.54	4.32	1.47	.10	.90

Note. SIAS= Social Interaction Anxiety Scale, SPIN = Social Phobia Inventory.

Table 5

Manipulation Check Items by Condition

Measure	<u>Control</u>		<u>SA-standard</u>		<u>SA-mistake</u>		<i>F</i> (2,116)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Importance	3.98 _a	2.37	5.77 _b	1.35	6.22 _b	1.24	18.97	.000
Live up to	4.32 _a	2.08	5.38 _b	1.46	6.10 _b	1.02	12.64	.000
Self-critical	3.49 _a	1.73	3.89 _{ab}	1.93	4.76 _b	1.73	5.32	.006
Self-compassion	3.78 _a	1.63	4.82 _b	1.49	4.71 _b	1.63	5.10	.008
Positive	4.20 _a	1.89	5.37 _b	1.28	3.15 _c	1.57	18.68	.000
Negative	3.02 _a	1.97	2.95 _a	3.36	4.51 _b	1.65	5.42	.006

Note. Means in the same row that do not share subscripts are significantly different ($p < .05$).

SA-mistake conditions (all $p < .01$). The SA-mistake condition rated themselves as significantly more self-critical than the control condition ($p = .005$) but not than the SA-standard condition ($p = .09$). The control condition rated themselves as significantly less self-compassionate than the SA-mistake ($p = .026$) and SA-standard ($p = .013$) conditions. The SA-mistake condition rated their experience as significantly less positive than the control condition ($p = .011$), who rated it as significantly less positive compared to the SA-standard condition ($p = .005$). Finally, the SA-mistake condition rated their experience as significantly more negative than the control and the SA-standard conditions ($p = .016$ and $p = .013$, respectively).

General Distress and State Self-Compassion

There was a significant difference between conditions on the SUDS, $F(2, 118) = 5.78, p = .004$. The SA-mistake condition was significantly more distressed (see Table 6) compared to both the SA-standard condition and the control condition ($p = .009$ and $p = .014$, respectively). There was no significant difference between the SA-standard condition and the control condition ($p = .98$).

State self-compassion was measured across conditions to determine whether they differed in how self-compassionate they were in that moment. Participants did not significantly differ in levels of state self-compassion based on condition, $F(2, 118) = .73, p = .48$. The S-SCS was comprised of positive (e.g. “I am trying to keep my emotions in balance”) and negative (e.g. “I am consumed by feelings of inadequacy”) items. A MANOVA was run to determine whether conditions differed in levels of state self-compassion based on valence subscale. The model was significant, $F(2, 118) = 2.68, p = .03, \eta^2 = .043$. There was a significant difference between condition in how self-

Table 6

General Distress and State Self-Compassion by Condition

Measure	<u>Control</u>		<u>SA-standard</u>		<u>SA-mistake</u>		<i>F</i> (2,118)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
SUDS	24.34 _a	25.19	23.13 _a	27.00	41.88 _b	30.95	5.78	.004
S-SCS	38.39 _a	8.76	40.41 _a	6.41	39.90 _a	7.98	0.73	.483

Note. SUDS = Subjective Units of Distress Scale; S-SCS = State Self-Compassion Scale; Means in the same row that do not share subscripts are significantly different ($p < .05$).

compassionately they responded on the positive subscale ($p = .05$), not the negative subscale ($p = .15$). The difference found on the positive subscale was driven by the SA-mistake condition, who showed significantly higher levels of state self-compassion compared to the control condition ($M = 23.46$, $SD = 5.12$ and $M = 20.59$, $SD = 5.92$, respectively), but not compared to the SA-standard condition ($M = 21.69$, $SD = 4.74$). There was no statistically significant difference between conditions in state self-compassion on the negative subscale. The SA-standard condition did not significantly differ from the SA-mistake or control condition on either subscale.

Affective States Measure

A MANOVA was run to see whether conditions differed in the affective states. The MANOVA was significant, $F(2,118) = 2.59$, $p < .001$. Overall, the conditions significantly differed on the following affective states: love, joy, giving, empathic, connected, sympathy, grateful, proud, content, clear, vulnerable, critical, selfish, scared, and sad (all $p < .05$; see Table 7). They did not significantly differ in how humble, confused and angry they felt (all $p > .05$).

Certain affective states are of particular relevance to self-affirmation. For example, feelings of love and connection pertain to the self-transcendence perspective of self-affirmation (Lindsay & Creswell, 2014). Participants in the SA-standard condition felt significantly higher feelings of love than did those in the SA-mistake condition ($p = .004$) and control condition ($p = .025$), and they felt more connected compared to the SA-mistake condition and control conditions (both $p < .001$). Self-affirmation has also been suggested as a means to reduce self-criticism (Creswell et al, 2007). Participants in the SA-mistake condition did feel significantly more critical compared to the SA condition ($p = .01$) and

Table 7

Affect Measure Items by Condition

Measure	<u>Control</u>		<u>SA-standard</u>		<u>SA-mistake</u>		<i>F</i> (2,112)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Love	2.78 _a	1.65	3.92 _b	1.08	3.10 _a	1.48	6.43	.002
Joy	2.81 _a	1.63	3.76 _b	0.91	2.28 _a	1.40	12.18	.000
Giving	2.46 _a	1.50	3.45 _b	1.06	2.18 _a	1.18	10.91	.000
Empathic	2.59 _a	1.50	3.53 _b	1.11	2.58 _a	1.20	6.94	.001
Connected	2.78 _a	1.55	4.05 _b	0.96	2.78 _a	1.23	12.90	.000
Sympathy	2.24 _a	1.26	3.11 _b	1.27	2.75 _{ab}	1.28	4.38	.015
Grateful	2.89 _a	1.56	4.24 _b	1.03	3.25 _a	1.43	9.96	.000
Proud	2.57 _a	1.39	4.18 _b	1.06	2.68 _a	1.46	18.00	.000
Content	2.76 _a	1.34	3.95 _b	0.96	2.63 _a	1.31	13.71	.000
Clear	2.62 _a	1.21	3.61 _b	1.05	2.72 _a	1.34	7.60	.001
Vulnerable	2.05 _a	1.29	2.55 _{ab}	1.41	3.00 _b	1.41	4.56	.012
Critical	2.24 _a	1.28	2.24 _a	1.28	3.13 _b	1.29	6.22	.003
Humble	2.54 _a	1.33	3.11 _b	1.18	2.98 _{ab}	1.17	2.19	.117
Selfish	1.35 _a	0.75	1.74 _a	1.03	2.30 _b	1.36	7.45	.001
Scared	1.46 _a	1.04	2.05 _{ab}	1.29	2.35 _b	1.43	4.87	.009
Sad	1.70 _a	1.13	2.03 _a	1.17	2.70 _b	1.29	6.98	.001
Confused	1.57	.93	1.87	1.10	2.10	1.26	2.23	.112
Angry	1.54 _a	1.10	1.61 _a	1.00	2.08 _b	1.31	2.53	.084

Note: Means in the same row that do not share subscripts are significantly different ($p < .05$).

control condition ($p = .008$); the SA-standard and control conditions did not differ from one another in how critical they felt. Self-affirmation (Steele, 1988) appeals to the drive to maintain “self-integrity” and positive self-regard; therefore, it is possible people who have self-affirmed may feel more proud. The SA-standard condition rated themselves as significantly more proud than the SA-mistake condition and control condition (both $p < .001$). Finally, self-affirmation has been shown to increase various forms of happiness (Nelson et al., 2014) and the SA-standard condition did rate themselves as feeling more “joy” and “content” compared to SA-mistake and control conditions.

Discussion

As hypothesized, the “mistake” self-affirmation (SA-mistake) manipulation led to higher distress and worse overall affect compared to the standard self-affirmation manipulation. The SA-mistake condition showed significantly more distress than both the SA-standard condition and the control condition, who did not differ from one another. It is not merely writing about a mistake that was distressing, as the control group did not feel more distressed than the SA-standard group. Writing about a mistake within a domain that is valuable in one’s life is likely to be much more bothersome than writing about a mistake in a domain that is unimportant.

Despite these differences, it is interesting that both the self-affirmation conditions (standard and mistake) rated themselves as more self-compassionate than the control condition (using the manipulation check items). Neff (2003b) found that self-compassion is most relevant during times of shame and self-criticism. Although both the control and the SA-mistake condition discuss a mistake which is likely to invoke such feelings as shame

and self-criticism, perhaps it is stronger when discussing a mistake in a personally relevant domain. The control group, who discussed a mistake in an unimportant value, did not feel that they wrote about their mistake self-compassionately. Further, the SA-standard manipulation, in which one doesn't discuss a mistake, but just discusses experiences within an important value, also felt that they wrote about their experiences more self-compassionately. This suggests that there could be something about discussing important values that invokes a sense of self-compassion, at least self-perceived self-compassion. Although the SA-standard and SA-mistake conditions perceived themselves to have been more self-compassionate, they did not show higher scores on the state S-SCS. None of the three conditions significantly differed in their levels of state self-compassion. Neff et al. (2020) published a state self-compassion scale; however, when conducting the present study, there was no official state self-compassion scale and so it was modified from the SCS – short form (Neff, 2003a). It was modified to be general enough for participants to respond to having written about a memorable experience *and* a mistake. Initially, it was surprising that the SA-standard condition, who wrote about a memorable experience, did not have higher feelings of state self-compassion than the SA-mistake condition and control condition, who wrote about mistakes. The difficulty lies in the fact that the scale was developed to be answered within the context of a mistake, as that is when self-compassion is most relevant. It was likely difficult for the SA-standard condition to respond to statements such as “when thinking back on my experience, I am trying to see my flaws as part of the human condition” and “when thoughts about my experience upset me, I try to keep my emotions in balance” given that these are most likely irrelevant when thinking about a memorable *experience* in your top-rated value, rather than a mistake.

In line with this possibility, when breaking down the S-SCS into positive and negative subscales, there was a statistically significant difference found on the positive subscale, and this difference was driven by the SA-mistake condition. The SA-mistake condition had significantly higher scores of state self-compassion on the positive subscale compared to the control condition. There were no differences in state self-compassion found between the SA-standard condition and either the SA-mistake or control condition, suggesting that they may have found it difficult to respond to items tailored to measure feelings towards a mistake.

Certain affective states are worth discussing given their relevance to self-affirmation. For example, the self-transcendence perspective of self-affirmation claims that self-affirmation works through making one feel more love and connection to others (Crocker et al., 2008; Lindsay & Creswell, 2014). Participants in the SA-standard condition felt significantly higher feelings of love and significantly more connected than did those in the SA-mistake condition and control condition. Both the SA-mistake and control condition wrote about mistakes; this exercise likely does not foster feelings of love and connection the way writing about memorable experiences in important values would. This is an important divergence that the SA-mistake manipulation makes from a standard self-affirmation manipulation and suggests that it may be fundamentally different. It is important to note here that although self-compassion manipulations are also conducted in the context of a mistake and *do* foster feelings of connection (Akin & Akin, 2015), they are directly prompted to discuss ways in which others have shared similar experiences (common humanity), which would foster such feelings.

Self-affirmation has also been suggested as a means to reduce self-criticism (Creswell et al, 2007; Bucchianeri & Corning, 2012). In line with the literature, the SA-standard condition reported feeling less critical on the Affect Scale compared to the SA-mistake condition. Further, the SA-mistake condition rated themselves as significantly more critical than the control condition, suggesting that writing about a mistake in an important value (SA-mistake) would lead to more critical feelings than would writing about a mistake in an unimportant value (control condition). Similarly, when looking at the *manipulation check* item regarding how self-critical participants perceived themselves to be when writing about their ‘experience’, the SA-mistake condition did indicate that they felt more self-critical than the control condition, although surprisingly they did not perceive themselves as more self-critical compared to the SA-standard condition.

The feeling “pride” was of interest, as self-affirmation appeals to the drive to maintain “self-integrity” and positive self-regard (Steele, 1988). As expected, the SA-standard condition rated themselves as significantly more proud than the SA-mistake condition and control condition. These findings suggest that writing about the value in the standard manipulation worked to maintain self-integrity, as expected, whereas writing about a mistake did not.

Finally, self-affirmation has been shown to increase various forms of ‘happiness’ (i.e. hedonic and eudaimonic; Nelson et al., 2014). Similarly, the SA-standard group rated themselves as significantly more “joyful” and “content” on the Affect Scale compared to the SA-mistake and control conditions.

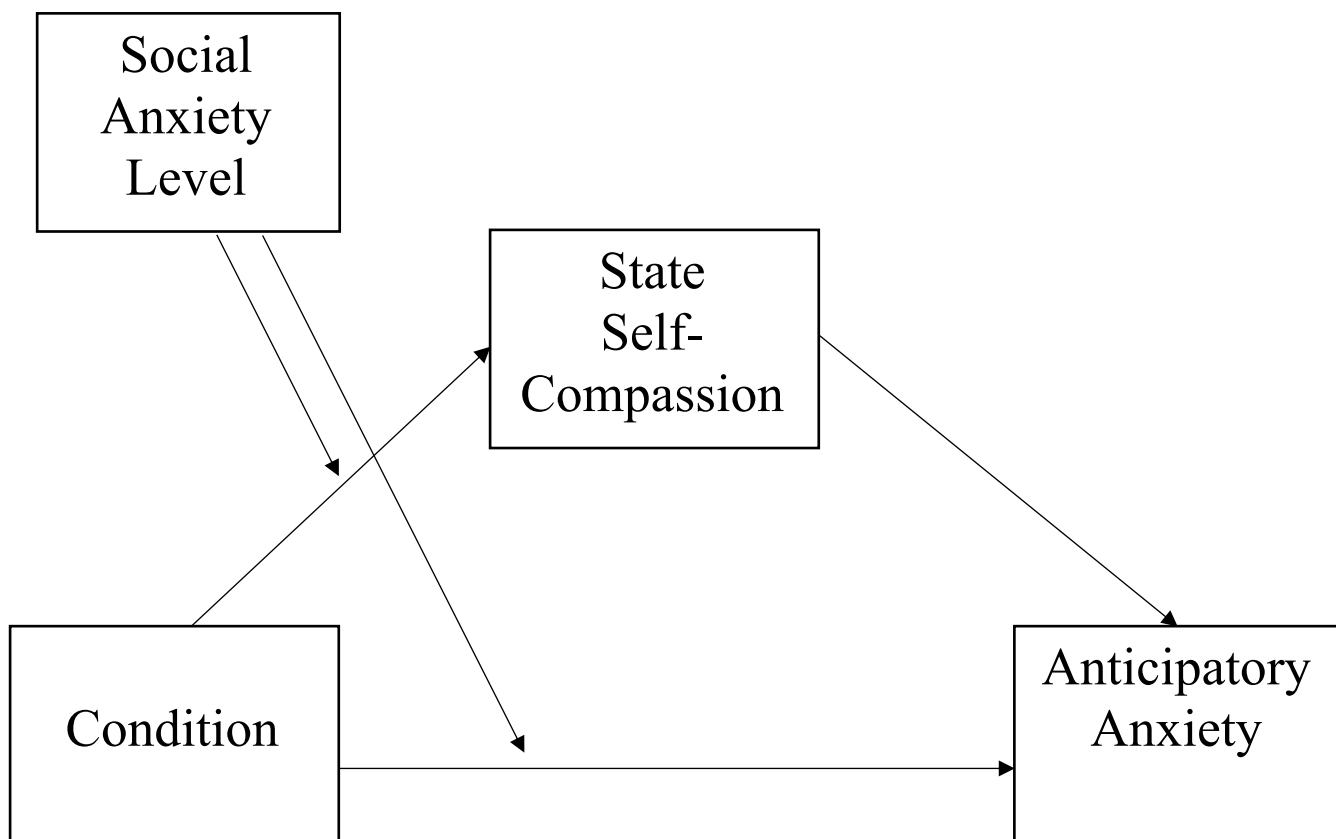
Given that the SA-mistake condition seemed to differ in some theoretically important ways from the SA-standard condition, the focus of study three was to assess

whether a standard values-affirmation manipulation would reduce anticipatory anxiety. We decided to re-run study one using a standard values-affirmation condition to get a more accurate picture on whether self-affirmation reduces anticipatory anxiety, and whether it does so by increasing state self-compassion.

Study Three

Study three compared a standard values-affirmation condition to a control condition on levels of anticipatory anxiety pertaining to an upcoming speech task. We did not include a self-compassion manipulation in study three because we wanted to test an authentic values-affirmation, not in the context of a mistake. Given self-compassion is most relevant in the context of a mistake, we felt that it led to too many discrepancies between conditions. Instead, we chose to focus on just values-affirmation and to see whether state self-compassion was a mechanism of change. We hypothesized that a standard values-affirmation manipulation would lead to reduced anticipatory anxiety due to increased state self-compassion. This time, participants were preselected for high versus low social anxiety in order to explore whether a self-affirmation manipulation is more effective for those with high social anxiety, compared to those with low social anxiety. It was hypothesized that, just as self-compassion has been found to be especially effective for those with high social anxiety (Harwood & Kocovski, 2017), self-affirmation would similarly be more effective for this group. Therefore, it was expected that there would be an interaction between anxiety level and condition such that the high social anxiety group would report lower levels of anticipatory anxiety when in the self-affirmation condition compared to the control condition, but the low social anxiety group would report similar levels of anticipatory anxiety regardless of condition. Further, it was hypothesized that state self-

Figure 3.

Hypothesized Moderated Mediation

compassion would mediate the effect of self-affirmation on reduced anticipatory anxiety for those with high social anxiety (see Figure 3).

Method

Participants

There were 209 undergraduate students that participated in the study. Thirty-eight participants were excluded due to being suspicious about the nature of the study. Specifically, they were not convinced they had to give the speech (the anxiety induction). It is suspected that the participants' friends who had taken the first study may have told them they wouldn't have to give the speech, leading to a high exclusion rate for the third study. This left a total of 171 participants between the ages of 17 and 27 (average age 18.49, 84% female; 70.2% White, 12.9% Asian, 4.7% Black, 11% other) enrolled in a psychology course at Wilfrid Laurier University that participated in this study. Participants were preselected for high social anxiety using standard cut-offs (SPIN = 30 *and* SIAS = 34; Harwood & Kocovski, 2017; $n = 78$) or low social anxiety (SPIN = 10 *or* SIAS = 19; $n = 93$). They were randomly assigned to either complete a self-affirmation writing exercise ($n = 82$) or a control writing exercise ($n = 89$). The participants received 1.0 credit towards their course grade for partaking in this study.

Materials

The baseline measures used were the SPIN, SIAS, one-item depression scale, SCS and a one-item Self-Esteem scale. These were all the same as what was used in study one, with the exception of the one-item depression scale (this item replaced the BDI). The same outcome measures were also used as in study one: SUDS, STAI-S, ASBQ and modified S-

SCS. An additional measure was used to examine state self-compassion: The Feelings of State Self-Compassion Scale.

Single Depression Item. A one-item *depression* scale was used: “I feel depressed”. Participants responded to this statement on a 7-point scale ($1 = \text{not very true of me} \rightarrow 7 = \text{very true of me}$).

State Self-Compassion Scale. The same modified state self-compassion scale from study one was used as the primary measure of state self-compassion.

Feelings of State Self-Compassion. The *Feelings of State Self-Compassion Scale* (FSSC; Lindsay & Creswell, 2014) is a seven-item measure borrowed from Lindsay and Creswell concerning feelings related to self-compassion. Participants are asked to rank how much they feel 7 affective states towards themselves leading up to their speech ($1 = \text{not at all} \rightarrow 7 = \text{extremely}$). The states are: critical, sympathetic, grateful, trusting, vulnerable, joyful, and loving. A total score is calculated by adding each individual item’s score (items 1 and 5 are reverse-scored). This measure was added as a secondary measure of state self-compassion. Whereas the S-SCS is modified from the SCS (Neff, 2003a) and taps into the three constructs of self-compassion (self-kindness, common humanity, and mindfulness) the FSSC taps into other theoretically relevant feelings. The FSSC was created by Lindsay and Creswell (2014) to determine whether a self-affirmation induction led to an increase in present-moment feelings that are theoretically associated with self-compassion. Unlike the modified state self-compassion scale, the FSSC is more vague and does not probe into how self-compassionate participants were in specific ways while preparing for their speech.

Manipulation check. The manipulation check consisted of one brief statement that participants responded to on a 7-point Likert scale: “what I wrote about was very important to me” ($1 = \text{not at all important} \rightarrow 7 = \text{extremely important}$).

Procedure (see Appendix C)

Participants were told that the purpose of the study was to better understand thought processes surrounding important values. Baseline measures (depression, self-compassion) were administered to ensure that there were no baseline differences between conditions.

Participants were randomly assigned to the self-affirmation manipulation or a control condition, creating a total of four conditions: 1) high social anxiety/self-affirmation manipulation ($n = 36$); 2) high social anxiety/control ($n = 42$); 3) low social anxiety/self-affirmation manipulation ($n = 46$); and 4) low social anxiety/control ($n = 47$).

Self-affirmation manipulation. The self-affirmation manipulation was a standard values-affirmation used in previous research (Lindsay & Creswell, 2014). Participants were instructed to rank a set of values from 1 (most important) to 13 (least important). The values were: artistic skills, sense of humor, relationships with friends/family, spontaneity/living live in the moment, social skills, athletics, musical ability/appreciation, physical attractiveness, creativity, academic skills, romance, religion, and other. They were then asked to complete a writing exercise discussing their top-ranked value. Specifically, the instructions read: “Consider your top ranked value (the value *most* important to you – ranked number 1). Describe why this value is important to you and how it has made you feel good about yourself.”

Control condition. The control condition was intended to account for any effects resulting from writing about a value, but without any aspect of self-affirmation. The

control condition received the same instructions to rank the set of 13 values; however, they were instructed to write about their bottom ranked value. Specifically, the instructions read: “Consider your bottom ranked value (the value *least* important to you – ranked number 13). Describe why you think this value might be important to somebody else.”

Following the self-affirmation manipulation phase, there was a brief manipulation check regarding how important the value that they wrote about was to them. All participants then underwent an anxiety induction, which was implemented through a three-minute impromptu speech task. Participants were told the following: “You will be taking part in a study that examines how people talk about their personal values in job interviews. This is an important topic because research has shown that performance in interviews is correlated with whether applicants are offered the position. In addition, how well people perform in mock job interview situations is highly predictive of how well they typically perform in real life and whether they will obtain future jobs. Please discuss how your personal values make you a desirable employee.” Participants were told they would be speaking in front of the group (ranging from 1-5 people, depending on how full the research slot is).

Following the anxiety induction, participants were asked to complete the SUDS, STAI-S, and ASBQ to assess anticipatory anxiety. They also completed two measures of state self-compassion – the FSSC, and the S-SCS. Upon completion of these measures, participants were told that they were not actually required to give the speech.

Data Analysis

A 2 (high social anxiety vs. low social anxiety) x 2 (self-affirmation vs. control) MANOVA was conducted to determine whether there was any effect of the independent

variables (social anxiety and self-affirmation manipulation) on the dependent variables (anticipatory anxiety and state self-compassion). Further, mediation analyses were run to explore whether self-affirmation increases state self-compassion, which in turn decreases state anxiety. Three moderated mediation models were tested using Hayes Process to determine whether self-affirmation decreases anticipatory anxiety by increasing state self-compassion, and whether this is moderated by social anxiety type ($X = \text{Condition}$; $M = \text{State Self-Compassion}$; $Y = \text{SUDS/STAI-S/ASBQ}$; $W = \text{Social Anxiety Type}$).

Results

Baseline Measures

Participants' social anxiety, depression, SC and self-esteem were measured across conditions. There were no significant baseline differences found on the SIAS, SPIN, SCS, depression scale or self-esteem scale, (all $F < 1$; see Table 8).

Manipulation Check

Participants in the self-affirmation condition were asked to pick an important value to discuss whereas participants in the control were asked to speak about their least important value. A manipulation check was conducted to determine how important the value they chose to write about was to them. There was a significant difference between conditions, $F(1, 167) = 428.59, p < .001, \eta^2 = .72$, such that those in the self-affirmation condition rated their value as significantly more important than those in the control condition ($M = 6.65, SD = .84$ and $M = 2.55, SD = 1.58$, respectively).

Effect of Condition on Anticipatory Anxiety and State Self-Compassion by Social Anxiety Level

A 2 (social anxiety type: high vs. low) x 2 (condition: self-affirmation vs. control)

Table 8

Baseline Descriptive Statistics by Condition

Measure	<u>Control</u> (<i>n</i> =89)		<u>Self-Affirmation</u> (<i>n</i> =81)		<i>F</i> (1,167)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
SPIN	26.81	14.98	24.54	14.75	.997	.32
SIAS	31.26	16.50	29.67	15.21	.426	.52
<i>Self-Compassion</i> SCS	72.42	16.05	74.37	17.21	.585	.45
<i>Depression</i> Single-item Depression	2.66	1.49	2.84	1.58	.576	.45
<i>Self-Esteem</i> Single-item Self-Esteem	4.39	1.52	4.09	1.33	1.97	.16

Note. SIAS= Social Interaction Anxiety Scale, SPIN = Social Phobia Inventory. SCS = Self-Compassion Scale.

MANOVA was run using the SUDS, STAI-S, ASBQ, FSSC and state SCS as dependent variables. The MANOVA revealed a main effect of social anxiety type, $F(5, 162) = 20.90$, $p < .001$, $\eta^2 = .39$. Those with high social anxiety (HSA) responded to the speech task with higher levels of anticipatory anxiety compared to those with low social anxiety (LSA). Those with HSA also had lower levels of state self-compassion compared to those with LSA, as depicted by their lower scores on the S-SCS and FSSC (both $p < .001$). There was also a main effect of condition, $F(5, 162) = 2.40$, $p = .04$, $\eta^2 = .07$, such that those in the self-affirmation condition responded to the speech task with lower levels of anxiety compared to the control condition ($p = .04$). The interaction effect was not significant, $F(5, 162) = 1.1$, $p = .36$, $\eta^2 = .03$.

Univariate analyses revealed a significant difference between the LSA group and the HSA group on the SUDS, $F(3, 166) = 63.83$, $p < .001$, $\eta^2 = .28$, STAI-S, $F(3, 166) = 79.93$, $p < .001$, $\eta^2 = .33$, ASBQ, $F(3, 166) = 65.11$, $p < .001$, $\eta^2 = .28$, FSSC, $F(3, 166) = 31.95$, $p < .001$, $\eta^2 = .16$, and S-SCS, $F(3, 166) = 74.47$, $p < .001$, $\eta^2 = .31$. Those with high social anxiety scored higher than those with low social anxiety on the SUDS, STAI-S, and the ASBQ (see Table 9). Those with high social anxiety scored lower than those with low social anxiety on the FSSC and the S-SCS.

The main effect of condition was driven by the differences between the self-affirmation and the control condition on the ASBQ, $F(1, 166) = 5.27$, $p < .02$. Those in the control condition showed higher levels of anticipatory processing than those in the self-affirmation condition. Conditions did not differ significantly on the remaining measures (SUDS, STAI-S, FSSC, and S-SCS; $p = .24$, $p = .24$, $p = .34$, and $p = .17$, respectively); however, the pattern of results was similar to the ASBQ on most other measures.

Table 9.

Anticipatory Anxiety and Self-Compassion Measures by Condition and Anxiety Group

Items	Control				Self-Affirmation			
	HSA (n=42)		LSA (n=47)		HSA (n=35)		LSA (n=46)	
	M	SD	M	SD	M	SD	M	SD
SUDS	69.95	19.71	44.50	25.71	67.91	16.64	38.50	24.21
STAI-S	61.17	10.70	47.55	14.68	62.34	9.52	41.82	13.06
ASBQ	34.81	5.99	27.06	6.83	33.31	7.06	23.59	7.96
FSSC	19.24	6.05	24.64	8.06	17.29	6.28	24.47	7.88
S-SCS	30.14	7.08	39.00	8.10	29.86	7.80	42.78	9.36

Note. HSA = high social anxiety. LSA = low social anxiety. SUDS = Subjective Units of Distress. STAI-S = State-Trait Anxiety Inventory – State Version. ASBQ = Anticipatory Social Behaviours Questionnaire. FSSC = Feeling of State Self-Compassion. S-SCS = State Self-Compassion Scale.

The interaction effect between social anxiety and condition was not significant at the multivariate level; however, there were two measures that were approaching significance at the univariate level. The STAI-S was approaching significance, $F(1, 166) = 3.27, p = .07, \eta^2 = .02$, and showed an interesting pattern of results. For those with low social anxiety (LSA), the self-affirmation condition showed lower levels of state anxiety compared to the control condition; for those with high social anxiety (HSA), their anxiety levels did not differ between self-affirmation and control condition. The S-SCS depicted a similar pattern, $F(1, 166) = 2.60, p = .11, \eta^2 = .02$. For the LSA group, there were higher rates of state self-compassion in the self-affirmation condition than the control condition; for the HSA group, there was no difference in levels of state self-compassion between the self-affirmation and control condition.

Self-Compassion as a Mediator

The hypothesized self-compassion mediation model was tested in two interlinked steps. First, a simple mediation model was run to see whether the self-affirmation condition increased state self-compassion, which in turn decreased state anxiety. Next, social anxiety was integrated into the model to see whether participants' level of social anxiety had a significant moderating effect on the model. It was hypothesized that self-affirmation would reduce anticipatory anxiety through increasing state self-compassion and that this effect would only be significant for those with high social anxiety, not low social anxiety. Six simple mediation models were tested using condition as the independent variable, one of two measures of state self-compassion (FSSC, S-SCS) as the mediator, and one of three measures of anticipatory anxiety as the dependent variable (SUDS, STAI-S, ASBQ). The

models were not significant with either S-SCS as the mediator ($p = .12, p = .14, p = .14$) or FSSC ($p = .55, p = .47, p = .47$) as the mediator.

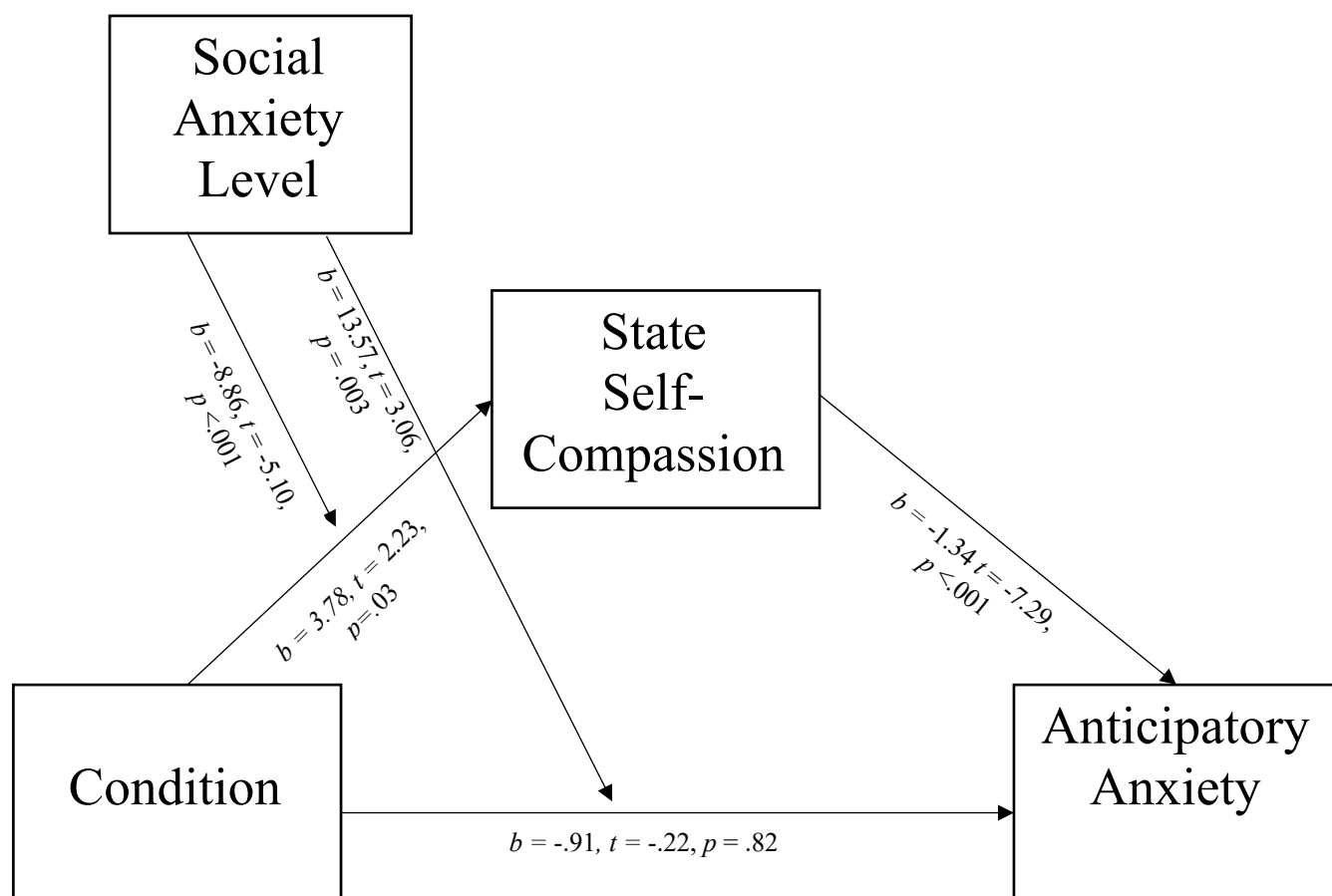
To examine the hypothesized effect of social anxiety as a moderator, three moderated mediation models (Haye's Process, model 8) were run using social anxiety type as the moderator. The moderated mediation models (see Figures 4, 5, 6) showed that those in the self-affirmation condition had significantly higher levels of state self-compassion (S-SCS), which in turn decreased anticipatory anxiety, and this was moderated by participants' level of social anxiety, such that this effect was only present for those with LSA, not for those with HSA. Interestingly, the direct path from condition to anticipatory anxiety was not significant, so it seems that state self-compassion accounted for the effect that condition had on reducing anxiety. Moreover, social anxiety moderated this effect, depicted by the fact that the moderated mediation model was significant while the simple mediation model was not.

Writing Valence, Writing Quantity, and Chosen Value

To help understand why the self-affirmation manipulation was effective for the LSA group but not the HSA group, we coded the data for several things. Firstly, we looked at how positively/negatively participants wrote in their writing exercise in case people with HSA were more negative and perhaps the self-affirmation was not able to over-ride the negativity (see Table 10). Two separate coders counted how many times participants wrote a positive or negative phrase (i.e. "I have always been good at music" or "I have never been very good at music so..."). A two-way random effect intra-class correlation (ICC) coefficient was used to determine the reliability of the coding method for how many positive and negative phrases participants wrote. Interrater reliability was moderate for

Figure 4.

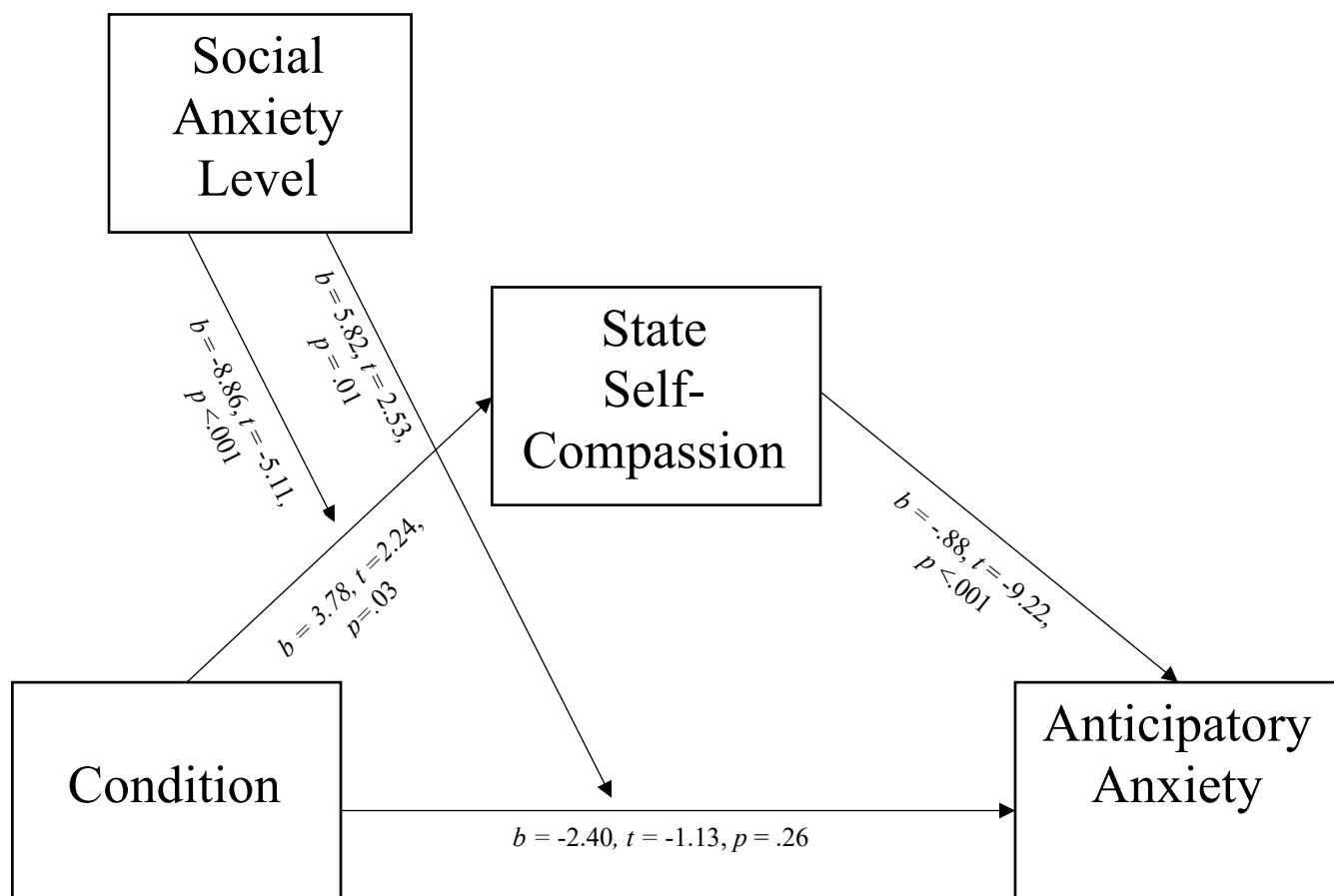
Social Anxiety Level Moderates the Mediation Effect of State Self-Compassion (SUDS)



Note. Condition = Self-Affirmation vs. Control. State Self-Compassion = S-SCS. Anticipatory Anxiety = SUDS. Social Anxiety Type = high social anxiety vs. low social anxiety.

Figure 5.

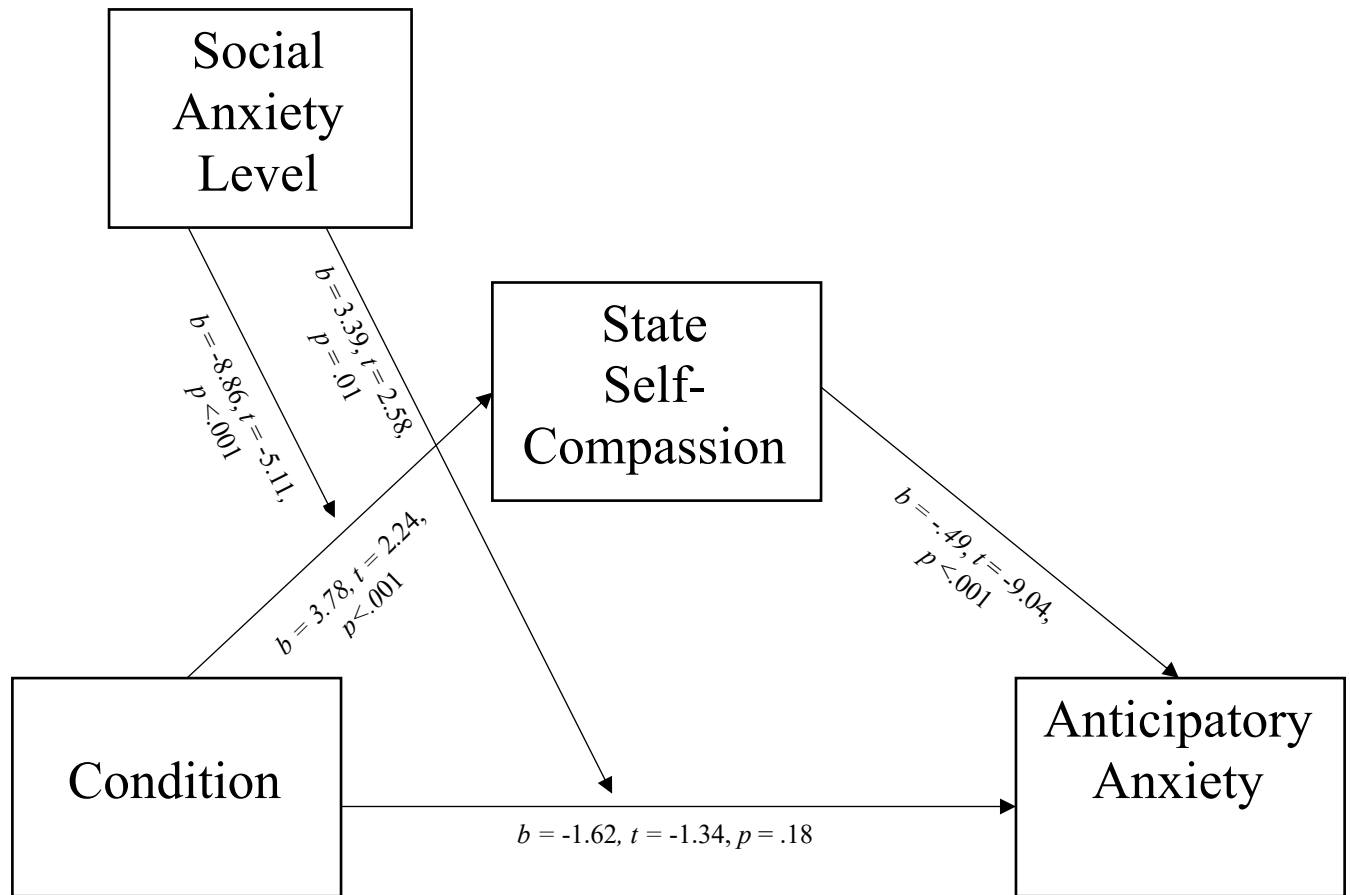
Social Anxiety Level Moderates the Mediation Effect of State Self-Compassion (STAI-S)



Note. Condition = Self-Affirmation vs. Control. State Self-Compassion = S-SCS. Anticipatory Anxiety = STAI-S. Social Anxiety Type = high social anxiety vs. low social anxiety.

Figure 6.

Social Anxiety Level Moderates the Mediation Effect of State Self-Compassion (ASBQ)



Note. Condition = Self-Affirmation vs. Control. State Self-Compassion = S-SCS. Anticipatory Anxiety = ASBQ. Social Anxiety Type = high social anxiety vs. low social anxiety.

Table 10

Valence and Writing Engagement across Conditions and Social Anxiety Level

Items	Control				Self-Affirmation			
	HSA (n=42)		LSA (n=47)		HSA (n=35)		LSA (n=46)	
	M	SD	M	SD	M	SD	M	SD
Valence								
Positive	.81	1.04	.81	.77	1.69	.93	1.65	.74
Negative	.55	.74	.55	.51	.06	.24	.04	.21
Writing Amount								
Speech	.90	.37	.98	.44	.74	.44	1.13	.45
Manipulation	.95	.99	.68	.99	1.43	.85	1.43	.89

Note. HSA = high social anxiety. LSA = low social anxiety.

both positive and negative phrases, $ICC = .66$ and $ICC = .62$, respectively. The main effect of social anxiety type was not significant, showing that participants with HSA were not writing more negatively/less positively than the LSA group ($p = .93$). There was a main effect of condition ($p = .000$), such that those in the self-affirmation condition wrote more positively and less negatively than the control group, $F(3, 167) = 35.27, p = .000$.

Next, we examined how much the participants wrote in two sections of the study: 1) the writing exercise (self-affirmation vs. control) and 2) the speech preparation page. It is possible that the self-affirmation condition was not effective for those with high social anxiety because they did not engage with the self-affirmation writing exercise to the same degree. The coders ranked their writing from 0-2 depending on how much they wrote (0 = very little, jot notes, without depth; 1 = several sentences, some depth; 2 = extensively wrote; with depth). Interrater reliability was good, $ICC = .73$. A 2 (self-affirmation vs. control) x 2 (high social anxiety vs. low social anxiety) MANOVA was run, with the amount they wrote as part of the manipulation and the amount they wrote for speech preparation as the two dependent variables.

The main effects of social anxiety type and condition were both significant ($p = .002, p = .000$), as was the interaction effect ($p = .036$). Looking at univariate analyses, the significant main effect of social anxiety type was based on how much they wrote in their speech task ($p = .001$), not how much they wrote regarding the manipulation ($p = .354$). The LSA group wrote more in their speech preparation than the HSA group; the LSA and HSA groups did not differ in how much they wrote in the manipulation writing task. The significant main effect of condition was based on how much they wrote in their writing exercise ($p = .000$), not how much they wrote in their speech preparation ($p = .939$).

Participants in the self-affirmation group wrote more in their manipulation writing exercise than those in the control group; the conditions did not differ in how much they wrote in their speech preparation. The interaction effect was based on how much they wrote in their speech ($p = .019$), but not how much they wrote as part of the manipulation writing task ($p = .332$). For the LSA group, participants in the self-affirmation condition wrote more in their speech preparation compared to the control condition; for the HSA group, participants in the self-affirmation condition wrote *less* during their speech preparation compared to the control condition.

Lastly, we looked at the value that participants ranked as their most important value. The most commonly top-ranked value was by far ‘relationships with family and friends’, with 61.9% of people ranking it as their #1 value. The second most common top-ranked value was ‘social skills’, with 9.7% of people ranking it as their #1 value. This means that a total of 71.6% of people’s top ranked value was a social value. Participants disproportionately selected ‘relationships with family and friends’ or ‘social skills’ regardless of their social anxiety type: for HSA, 63.6% selected ‘relationships with family and friends’ and 8.0% selected ‘social skills’; for LSA, 60.6% selected ‘relationships with family and friends’ and 11.0% selected ‘social skills’.

Discussion

Study three implemented a standard values-affirmation manipulation, not in the context of a mistake. In line with hypotheses there was a main effect of both social anxiety type and condition. Those with high social anxiety showed higher anticipatory anxiety and lower state self-compassion than those with low social anxiety. The self-affirmation condition had lower anticipatory anxiety (specifically, anticipatory processing) than the

control condition. The self-affirmation condition did not differ from the control condition in levels of state self-compassion.

Although the interaction effect was not significant, results on two measures were approaching significance: the STAI-S (state anxiety) and S-SCS (state self-compassion), though in the opposite direction of what was hypothesized. For those with low social anxiety, they had higher state anxiety and lower state self-compassion in the control group compared to the self-affirmation condition. For those with high social anxiety, there was no difference. The results on the SUDS (general distress) and the ASBQ (anticipatory processing) displayed the same pattern – for the low social anxiety group, they had higher distress and anticipatory processing in control compared to self-affirmation; for the high social anxiety group, their distress and anticipatory processing scores were almost the same across conditions. It seems that self-affirmation is actually more effective for those with low social anxiety and does not affect those with high social anxiety.

The mediation analyses provided further support for this notion. Although the simple mediation models (X = condition; M = S-SCS; Y = SUDS/STAI-S/ASBQ) were not significant, the moderated mediation (W = social anxiety type) models were. The moderated mediation models depicted that for *only the low social anxiety group*, self-affirmation reduced anticipatory anxiety, and this effect was mediated by state self-compassion.

These results are contrary to our hypotheses. We hypothesized an interaction effect in which the self-affirmation would be *more* effective for people with high social anxiety than people with low social anxiety, as we were hypothesizing a self-compassion account of self-affirmation (Lindsay & Creswell, 2014), and self-compassion has been shown to be

more effective for those with high social anxiety (Harwood & Kocovski, 2017). Instead, it appears that self-affirmation was only effective in reducing anticipatory anxiety for those with low social anxiety, and it had no effect for those with high social anxiety. So why was the self-affirmation manipulation ineffective for the HSA group?

The self-affirmation manipulation does appear to have worked, as people with low social anxiety showed lower anticipatory anxiety towards the upcoming speech task in the self-affirmation condition compared to the control condition. Therefore, there must be an explanation as to why the self-affirmation was not helpful for those with high social anxiety. To further investigate these results, two research assistants coded the participants' manipulation writing exercises and speech preparation. Firstly, they coded for how positively/negatively participants wrote in their writing exercise. We speculated that people with high social anxiety may have written more negatively throughout their writing exercise, dulling any effect of self-affirmation; however, we did not find support for this. The HSA group did not write more negatively or less positively than the LSA group. One limitation worth noting is that the interrater reliability was only 'moderate' for the positive/negative phrase count in participants' writing exercise.

Next, we looked at how much participants wrote for their writing exercise and speech preparation task, and inter-rater reliability was good for this coding. How much people wrote in their manipulation writing exercise was of particular interest, to explore whether the HSA group was not engaging with the self-affirmation task to the extent the LSA group was. Once again, we did not find support for this. There was a main effect of social anxiety level, such that the LSA group wrote more in their speech preparation task compared to the HSA group; however, the LSA group did not write more in the

manipulation writing exercise compared to the HSA group. There was a main effect of condition, such that the self-affirmation condition wrote more in their manipulation writing exercise than the control condition; the conditions did not differ in how much they wrote in their speech preparation. The interaction effect showed that for the LSA group, the self-affirmation condition wrote more in their speech preparation compared to the control condition. Interestingly, we found the opposite to be true for the HSA group – they actually wrote *less* in their speech preparation in the self-affirmation condition compared to the control condition. It appears as though the self-affirmation manipulation was specifically unhelpful for those with high social anxiety.

The unhelpful nature of the self-affirmation task among those with high social anxiety may be due to the values that participants selected to write about. Past research has shown that participants often rank a social aspect as their top-rated value (Crocker et al., 2008). Similarly, the value most participants chose to write about in the current research was relationships with friends and family (61.9%), an area in which people with high social anxiety are likely to feel incompetent. People with social anxiety disorder experience fewer positive emotions during everyday social interactions (Kashdan et al., 2013) and more anxiety and negative predictions about social events even during positive social encounters (Alden et al., 2008). People with high social anxiety also feel less competent in their social life (Alden & Wallace, 1995; Clark, 2001). The purpose of self-affirmation is to boost feelings of self-adequacy to protect against psychological threat; however, discussing a social value is not likely to boost feelings of self-adequacy for people with high social anxiety, despite it being an important value to them. A discussion of directions for future research to address this issue follows in the general discussion.

General Discussion

Mindfulness-based and values-based strategies have been offered as a way to improve the success rate of treatment for anxiety disorders (Hayes et al., 2012). The current research explored two related concepts: self-compassion and self-affirmation (specifically, a values-affirmation). A values-affirmation was of particular interest to us given the prominence of values in current therapies for social anxiety disorder (i.e. Acceptance and Commitment Therapy).

Self-compassion was previously found to be especially effective in reducing anticipatory anxiety for those with high social anxiety (Harwood & Kocovski, 2017). The current research aimed to build on this previous study and the Lindsay and Creswell (2014) study, by exploring whether a self-affirmation manipulation would also be effective in reducing anticipatory anxiety, and whether this effect would be mediated by state self-compassion and therefore be more effective for those with high social anxiety. Study one compared three conditions (self-compassion, self-affirmation, and control) in levels of anticipatory anxiety towards an upcoming speech task. Study two compared the modified self-affirmation manipulation used in study one to a standard self-affirmation manipulation. The third and final study compared a standard self-affirmation manipulation to a control condition on anticipatory anxiety as in study one; however, this time participants were preselected for high versus low social anxiety so that any differences between these groups could be examined.

In study one, a self-affirmation, self-compassion and control group were compared in their anticipatory anxiety related to an upcoming speech task. The self-affirmation and self-compassion manipulations were each modified slightly to be as consistent with one

another as possible. More specifically, the self-affirmation manipulation asked participants to recall a mistake (as self-compassion manipulations commonly draw on a mistake), and the self-compassion manipulation was in the context of their top-rated value (just as a standard self-affirmation manipulation is). It was hypothesized that both the self-compassion and self-affirmation condition would have lower anticipatory anxiety compared to the control condition, and that this would be due to an increase in state self-compassion.

We did not find support for our hypotheses in study one. The control condition had higher baseline levels of social anxiety and lower baseline levels of self-compassion compared to the self-compassion condition. After controlling for these baseline differences, there were no significant differences in anticipatory anxiety between the self-compassion, self-affirmation and control condition. Moreover, the mediation analysis was not significant after controlling for baseline differences, showing that there was no mediated effect of condition on state self-compassion and subsequently on lower anticipatory anxiety. We speculate that this may come down to the method used to implement self-affirmation. Participants were asked to recall a *mistake* (as opposed to the traditional ‘experience’) that they had made within the domain of their top-rated value, prior to discussing in full why this value is important to them. To discuss a mistake is likely to be distressing, not affirming, and may take away the legitimacy of a self-affirmation manipulation. This was addressed in study two.

The modified manipulation may have been the cause behind the other unexpected finding: that those with *low* social anxiety, rather than high social anxiety, actually appeared to benefit more from the self-compassion induction. A moderation analysis was

run to determine whether people respond differently to the self-compassion or self-affirmation conditions based on their baseline levels of social anxiety. Contrary to hypotheses, this model showed that for those with *low* social anxiety (and not for those with moderate or high social anxiety), a self-compassion induction reduced general distress compared to a control group. Once again, there was no difference between self-affirmation and control condition at any level of social anxiety. The fact that the self-compassion condition led to lower anticipatory anxiety compared to control for those with *low* social anxiety was surprising, given that previous research found self-compassion to reduce anticipatory anxiety more among those with *high* social anxiety, and not low (Harwood & Kocovski, 2017). The difference may be in the manipulation used. In the current research, participants were asked to discuss a mistake *within their most important value*, whereas typical self-compassion inductions have participants discuss a mistake more generally, not relating to their most important value. It is possible that discussing a mistake in the context of one's most important value is much more distressing than a mistake made in everyday life. The self-compassion manipulation in the context of a mistake was still effective for those with low social anxiety; however, people with high social anxiety have been shown to respond to stressful social situations with symptoms characteristic of those with PTSD (Erwin et al., 2006), including re-experiencing, avoidance, and hyper-arousal. Perhaps discussing a mistake in the context of their most important value was especially triggering for those with high social anxiety.

Study two compared levels of general distress and affect across three conditions: a standard self-affirmation (SA-standard), a self-affirmation in the context of a mistake (SA-mistake), and a control group. It was hypothesized that the modified self-affirmation

manipulation (SA-mistake) would lead to higher distress and overall worse affect compared to the standard self-affirmation manipulation, and therefore would not be a fair representation of self-affirmation. Self-affirmation aims to boost self-integrity (Steele, 1988), and a typical values-affirmation exercise is not framed within the context of a mistake. The goal in modifying the values-affirmation in study one was to keep it as consistent as possible with the self-compassion condition (which is often done in the context of shame or self-criticism, such as a mistake; e.g., Harwood & Kocovski, 2017); however, in retrospect, it seems obvious that writing about an experience that invokes shame will do just the opposite of boosting self-integrity. It is quite possible that self-affirmation would have reduced anticipatory anxiety, as hypothesized, had we used a fair representation of self-affirmation.

Study two confirmed that the SA-mistake and SA-standard manipulations were dissimilar. When done in the context of a mistake, the self-affirmation writing exercise led to higher levels of distress and lower positive affect/higher negative affect. While it is argued that mood or affect are not the mechanism behind self-affirmation's effects (McQueen & Klein, 2006), several of the specific items are still theoretically relevant. The affective states that were looked at in more detail due to their link to self-affirmation are: "pride", "critical", "love", "connected" and "joyful"/"content".

In general, self-affirmation refers to cognitive events that support a global sense of self-integrity (Steele, 1988). According to self-affirmation theory, discussing important values boost self-integrity and overall self-regard, which reduces defensiveness. When self-affirmed, participants have also been shown to have positive self-feelings (Lindsay & Creswell, 2014). In the current study, participants in the SA-standard condition felt more

“proud” compared to the SA-mistake condition and control condition. This is further relevant if self-compassion is a mechanism of effect underlying self-affirmation, as self-compassion also predicts positive affective states, and positively correlates to self-worth (Neff & Vonk, 2009). Self-affirmation also leads to decreased levels of self-criticism (Lindsay & Creswell, 2014). The SA-mistake condition showed significantly higher levels of self-criticism compared to the SA-standard condition and the control condition. The third and fourth affective state worth mentioning are “love” and “connected”. Recall the two main theoretical perspectives on self-affirmation: transcending-self perspective and self-resources perspective. The transcending-self perspective states that self-affirmation enables one to *transcend* one’s own image concerns by increasing outward-focused feelings (Crocker et al., 2008). In line with the transcending-self perspective of self-affirmation, studies have found self-affirmation to lead participants to show increased feelings of love and connectedness (Crocker et al., 2008; Lindsay & Creswell, 2014). Study two replicated this finding, with the SA-standard manipulation having higher self-perceived feelings of ‘love’ and ‘connected’ than the SA-mistake condition and the control condition. Finally, self-affirmation has been shown to improve both hedonic and eudaimonic well-being (“happiness”; Nelson et al., 2014). In line with this, the SA-standard group rated themselves as feeling significantly more “joyful” and “content” than the SA-mistake and control conditions. The results from study two led to the decision to re-run the first study using a true values-affirmation condition.

Study three compared a standard self-affirmation condition and a control condition on levels of anticipatory anxiety and state self-compassion. Participants were preselected for either high or low social anxiety so that these group’s response to the self-affirmation

condition could be compared. It was hypothesized that the self-affirmation condition would lead to lower anticipatory anxiety and that this effect would be mediated by increased state self-compassion. It was further hypothesized that this effect would only be significant for those with high social anxiety.

The results showed that those in the self-affirmation condition did have lower anticipatory anxiety compared to the control condition. The simple mediation model (with state self-compassion as the mediator) was not significant. However, the moderated mediation model (with social anxiety entered as a moderator) was significant; though, not in the direction we hypothesized.

Contrary to the hypothesis, the third study found that the self-affirmation manipulation was actually *only* effective for people with low social anxiety. This was similar to study one's results, which showed that the *self-compassion* manipulation was only effective in reducing anticipatory anxiety for those with low social anxiety. Study three results showed no significant difference in anticipatory anxiety between conditions for those with high social anxiety. There are two plausible explanations for this finding. First of all, high social anxiety has been found to inhibit a promotion system in which people "pursue rewards and strive toward the fulfillment of hopes and aspirations" (Scholer et al. 2012), helping provide a sense of "life purpose". Values are related to having a sense of purpose and as such, discussing values would not likely be beneficial for those not living up to these values and fulfilling their life purpose. Secondly, this study found that people typically wrote about social belonging or other social aspects: 61.9% said family and friends is their most important value; the next highest ranked value was social skills at 9.7%. People with high social anxiety struggle to form and maintain fulfilling relationships

(e.g., Ledley et al., 2008), in part due to anxiety and avoidance behaviors that are engaged to evade predicted negative social experiences (Clark, 2001; Hofmann, 2007). People with high social anxiety are overall unlikely to feel competent within the domain of social relationships (e.g., Herbert & Dalrymple, 2005; Dalrymple & Herbert, 2007), and therefore, the self-affirmation is not likely to work in the same way it does for others – to boost their feelings of self-adequacy. Perhaps had we specified that they only write about something that is highly important to them *and* in which they feel competent we would have seen results reflective of self-affirmation. Instead, we asked them their most important value (to which most ranked relationships with family friends as #1) and then had them write about that specific value. Writing about a social value could instigate negative feelings for those with high social anxiety, as they are likely to hold numerous references of times when they did not live up to this value; for example, by avoiding a party due to predicted negative judgments. These cognitions would likely compete with, if not override altogether, the positive impact that self-affirmation manipulations typically have in the face of threat.

Further, therapy focuses on relating the important value to the threat at hand (e.g., Kocovski et al, 2013; Kocovski et al, 2019; Arch et al., 2019). For example, somebody with social anxiety would bring their value of friendship to the forefront of their mind when attending a party that they would like to avoid. Focusing on why it is important, as opposed to their internal physical experiences, is a helpful tactic in motivating somebody to pursue valued living, even in the face of anxiety. Perhaps the current study should have had participants link their important value to the threatening situation at hand to better reflect the way values are used in therapy.

The mechanism of change in self-affirmation exercises is not well specified. There are two main theoretical perspectives regarding how self-affirmation works – the *self-resources perspective* states that self-affirmation boosts one's self-image for coping with threats (Sherman & Cohen, 2006), whereas the *transcending-self perspective* states that self-affirmation facilitates one's transcending self-image concerns by increasing other-directed feelings (Crocker et al., 2008). Lindsay and Creswell (2014) proposed a self-compassion account of self-affirmation, connecting the two perspectives. They theorized that: in regard to the self-resources perspective, the self-image boost is about feeling more *compassion* towards oneself (as opposed to a self-esteem boost); and in regard to the transcending-self perspective, the compassionate feelings generated by self-affirmation are self-focused (as opposed to other-focused). Their research supports this perspective, showing that self-affirmation led to increased prosocial behaviour, and it did so through increasing compassionate feelings towards oneself, which in turn promoted prosocial behaviour. A noteworthy contribution from the current research is that, just as Lindsay and Creswell (2014) found, there does appear to be a mediating role of state self-compassion on self-affirmation. For those with low social anxiety, the values-affirmation exercise led to reduced anticipatory anxiety and this was mediated by increased state self-compassion. The direct path of condition to anticipatory anxiety was not significant, while the indirect path (through state self-compassion) was significant.

This research adds to the literature which has recognized that individuals differ in their vulnerability to the threat and these differences can serve as a significant moderator of self-affirmation effects (Harris & Napper, 2005; Harris et al., 2007; Sherman et al., 2009).

Jessop et al. (2017) found that self-affirmation can actually exacerbate negative responses to stress under certain conditions. Their study focused on important life events that are characterized by low levels of control. They provided preliminary evidence that self-affirmation may actually have detrimental effects on those who are most vulnerable. Specifically, they investigated an imagined stressful childbirth scenario; those with high fear of childbirth and low confidence actually had more negative affect following a self-affirmation manipulation whereas those with low fear of childbirth and high confidence had more positive affect following a self-affirmation manipulation. Jessop et al. reasoned that self-affirmation may yield more negative results when defensive responses are actually advantageous (Sherman & Hartson, 2011), as self-affirmation lowers defensive responding. While we did not find self-affirmation to have a detrimental effect on those who are most vulnerable (the high social anxiety group), we did find that it was not helpful for them. Further, coding analyses hinted at a possible detrimental effect of self-affirmation on those with high social anxiety, as this group actually wrote *less* in their speech preparation following a self-affirmation manipulation compared to the control group. In contrast, the low social anxiety group, who benefitted from self-affirmation, wrote *more* in their speech preparation in the self-affirmation condition compared to the control group.

Finally, it is possible that the values articulation exercise may not have been long enough, or substantial enough, to yield results in a highly anxious sample. Although brief writing tasks have been shown to be effective for those with high social anxiety in some cases (Harwood & Kocovski, 2017), other research has found that more substantial values exercises consisting of revisiting the task, or even daily reminders to consider one's

personal values throughout their daily activities over a more extended period of time, may be necessary to alter anxiety levels in an anxious population (Tull et al., 2018).

Limitations, Future Directions, and Implications

This study suggests that a brief values exercise is not effective for people with high social anxiety; however, we did not work with a clinical sample and therefore this research cannot be generalized to this population. It is also reasonable to suggest values work be more relevant to the task or threat at hand (consistent with how values are used in therapy) in order for it to be successful in reducing anxiety for a highly anxious sample. Values are a useful tactic in therapy to motivate people towards values consistent living in the face of negative internal experiences, such as anxiety. Discussing values in general, without aiming to redirect focus on the values, as opposed to negative internal experiences (e.g., anxiety), may not be beneficial.

Further, we did not measure how competent participants felt within their valued domain. This may have been a crucial factor in whether the values-affirmation was actually affirming, as it should be. For those with high social anxiety, discussing a social facet of life (i.e. relationships with friends and family or social skills) may have not been self-affirming if they feel incompetent in their social life. Future research with a highly socially anxious population should specify that the value chosen be one that is not only important to them but also in a domain in which they feel competent.

The current research implemented the values-affirmation prior to the ‘threat’ (speech task). Self-affirmation research within social psychology often puts the threat first, then allows one to buffer against it with a self-affirmation manipulation. In therapy, values articulations are implemented prior to any threats; therefore, we chose to put it prior to the

threat within this research as well, given our interest in the applicability of this research to the clinical side of psychology. The self-affirmation manipulation was still effective in reducing anticipatory anxiety for those with low social anxiety, showing that it still worked regardless of its placement.

There was no existing, validated measure of state self-compassion at the time of designing these studies. We modified Neff's (2003a) short form scale, and therefore it is possible the S-SCS did not measure what it intended to. As a secondary measure, we also borrowed the Feelings of State Self-Compassion Scale (FSSC) used by Lindsay and Creswell (2014), which include theoretically relevant items with self-compassion. Future research should use Neff's State Self-Compassion Scale – Long form (SSCS-L; Neff et al., 2020) to further support the link between self-affirmation and state self-compassion.

As of now, there is not a clear mechanism of effect underlying self-affirmation. Further, most research on self-affirmation has been done within social psychological phenomena, such as bias. As noted by Czech et al. (2011), future research would do well to further investigate mediators and moderators of self-affirmation on psychological stress. This would help to create a well-rounded picture of self-affirmation and contribute to further knowledge of how it exerts its effects. The current research provides evidence for a self-compassion account of self-affirmation, originally put forth by Lindsay and Creswell (2014). It seems as though, for some people, self-affirmation can have beneficial effects (e.g. increased prosocial behaviour; reduced anticipatory anxiety) that are explained by an increase in state self-compassion. This was shown in the research done by Lindsay and Creswell and is further evidenced in the current research.

Given that a self-compassion induction has been shown to be especially effective in reducing anticipatory anxiety for those with high social anxiety (Harwood & Kocovski, 2017), and self-compassion may be one of the mechanisms of change underlying self-affirmation, it is still possible that people with high social anxiety will be receptive to a self-affirmation induction, *under the right conditions*. Further research is needed to clarify this. The values-affirmation exercise should be modified for this population to ensure they are not only speaking about something highly important to them, but also about a domain in which they feel competent. While many people undeniably value their relationships with family and friends, people with high social anxiety may still feel that they don't thrive in social areas such as this, despite how much they value their social relationships. Instead, people with high social anxiety should be directed to write about something that is not only very important to them, but that they also feel competent in.

To confirm whether values-affirmations are in fact only effective in reducing anxiety for those with low social anxiety, future values-affirmation manipulations should be less focused on matching the existing social psychology literature and more focused on being relevant to clinical psychology and therapy. Specifically, future research should examine a values articulation that a) is relevant to the threat at hand, as this is how values are often contextualized in therapy; and b) stipulates the value chosen be one that they feel competent in, rather than in an area in which they may feel especially inadequate.

Despite finding results contrary to hypotheses, the current research tells an intriguing story and is suggestive of several noteworthy contributions. Firstly, modifying self-compassion inductions may alter their effect, and this may be especially true among specific, vulnerable populations. Secondly, a values-affirmation implemented among

certain populations may benefit from specifying that participants focus on a value that is not only important to them, but one in which they also feel competent. This is especially true for populations who may feel incompetent socially (such as those with high social anxiety), as it appears that people often choose a social domain as their top-rated value.

Thirdly, this research contributes to the literature showing that self-affirmation manipulations may yield different results (or be ineffective altogether) for certain vulnerable populations (Harris & Napper, 2005; Harris et al., 2007; Sherman et al., 2009).

Finally, the current research provides further support for the self-compassion account of self-affirmation (Lindsay & Creswell, 2014), as state self-compassion was found to mediate the effect of self-affirmation on reduced anticipatory anxiety.

Appendix A – Study 1

Self-Compassion Manipulation

Consider your top ranked value (the value most important to you). Think about a time when you made a mistake pertaining to this important value.

Self-Compassion:

- Write a paragraph expressing kindness to yourself in the same way you might express kindness for someone close to you
- List some of the ways in which other people have experienced similar events to the one you described.
- List the emotions you felt during this event and explain (as objectively as possible) why you felt that emotion.

Self-affirmation Manipulation

Consider your top ranked value (the value *most* important to you – ranked number 1). Think about a time when you made a mistake pertaining to this important value.

- Briefly state 3 or 4 times in which you made a mistake related to this important value.
- Describe the mistake that was most exceptional, influential to you, or important to you.
- Explain in full why this value is important.
- Identify your top two reasons why it's important to you.
- Identify how you have acted consistently with this value in the past.

Control

Consider your bottom ranked value (the value *least* important to you – ranked number 12). Think about a time when you made a mistake pertaining to this important value.

- Write a paragraph describing your role in this event.
- Who else was involved in this event?
- Describe your feelings about this event.
- Explain in full why this value is important to others.
- Identify your top two reasons why you think this value is important to others.

 Manipulation Check

Rate how much you agree with the following statement from 1 (not at all) to 7 (extremely).

1) The value I wrote about is very important to me.

Not at all important						Extremely important
1	2	3	4	5	6	7

 Modified State Self-Compassion Scale (S-SCS)

Think about how you feel in this moment while preparing for your speech.

“While preparing for my speech...”

Characteristic	Almost Never	Not Often	Sometimes	Fairly Often	Almost Always
1. ...I am consumed by feelings of inadequacy	1	2	3	4	5
2. ...I am understanding and patient towards those aspects of myself I don't like	1	2	3	4	5
3. ...I am trying to take a balanced view of this situation	1	2	3	4	5
4. ... I feel like most other people are less flawed than me	1	2	3	4	5
5. ...I am trying to see my flaws as part of the human condition	1	2	3	4	5
6. ... I am giving myself the caring I need	1	2	3	4	5
7. ... I am trying to keep my emotions in balance	1	2	3	4	5
8. ... I think about my inadequacies and feel alone in my failures	1	2	3	4	5
9. ...I tend to obsess and fixate on everything that is wrong with my speech	1	2	3	4	5
10. ... I am reminding myself that feelings of inadequacy are shared by most people	1	2	3	4	5
11. ...I am disapproving and judgmental of my speech	1	2	3	4	5
12. ...I am intolerant and impatient towards aspects of my speech I don't like	1	2	3	4	5

Appendix B – Study 2

Self-affirmation Manipulation – Phase 1

This part of the study focuses on events experienced within particularly important domains and the effect that these events have...

Consider the following values and rank them from least (12) to most (1) important:

- _____ athletic ability
- _____ being good at art
- _____ belonging to a social group
- _____ career
- _____ creativity
- _____ government or politics
- _____ independence
- _____ learning and gaining knowledge
- _____ music
- _____ relationships with family and friends
- _____ sense of humor
- _____ spiritual or religious values

Self-Affirmation Manipulation – Phase 2

Self-Affirmation Standard Condition:

Consider your top ranked value (the value *most* important to you – ranked number 1). Think about a time when this important value was relevant in your life.

- Briefly state 3 or 4 memorable experiences that pertain to this important value.
- Describe the experience that was most exceptional, influential to you, or important to you.
- Explain in full why this value is important. Identify your top two reasons why it's important.

Self-Affirmation Mistake Condition:

Consider your top ranked value (the value *most* important to you – ranked number 1). Think about a time when you made a horrible mistake pertaining to this important value.

- Briefly state 3 or 4 times in which you made a mistake related to this important value.

- Describe the mistake that was most exceptional, influential to you, or important to you.
- Explain in full why this value is important. Identify your top two reasons why it's important.

Control Condition:

Consider your lowest ranked value (the value *least* important to you – ranked number 12). Think about a time when you made a horrible mistake pertaining to this value.

- Briefly state 3 or 4 times in which you made a mistake related to this value.
- Describe the mistake that was most exceptional, influential to you, or important to you.
- Explain in full why this value is important to others. Identify your top two reasons why it's important to others

Manipulation Check

1) Looking back, how important to you is the value you chose to write about?

Not at all self-critical						Extremely self-critical
1	2	3	4	5	6	7

2) In general, I try to live up to these values

Not at all self-critical						Extremely self-critical
1	2	3	4	5	6	7

3) How self-critical were you when writing about your personal event?

Not at all self-critical						Extremely self-critical
1	2	3	4	5	6	7

4) To what extent did you write about your personal event compassionately?

Not at all compassionately						Extremely compassionately
1	2	3	4	5	6	7

5) How positive was the event you wrote about?

Not at all positive						Extremely positive

1	2	3	4	5	6	7
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6) How negative was the event you wrote about?

Not at all negative						Extremely negative
1	2	3	4	5	6	7

State Self-Compassion Scale (S-SCS) – study two

Think about how you felt in this moment while discussing your experience related to an important value

“When thinking back on my experience I wrote about...”

Characteristic	Almost Never	Not Often	Some times	Fairly Often	Almost Always
1. ...I am consumed by feelings of inadequacy	1	2	3	4	5
2. ...I am understanding and patient towards those aspects of myself I didn't like during my experience	1	2	3	4	5
3. ...I am trying to take a balanced view of this situation	1	2	3	4	5
4. ... I feel like most other people probably share these experiences	1	2	3	4	5
5. ...I am trying to see my flaws as part of the human condition	1	2	3	4	5
6. ... I am giving myself the caring I need	1	2	3	4	5
7. ... I am trying to keep my emotions in balance	1	2	3	4	5
8. ... I think about my inadequacies and feel alone in my failures	1	2	3	4	5
9. ...I tend to obsess and fixate on everything that was wrong	1	2	3	4	5
10. ... I am reminding myself that feelings of inadequacy are shared by most people	1	2	3	4	5
11. ...I am disapproving and judgmental about my experience	1	2	3	4	5
12. ...I am intolerant and impatient towards aspects of my speech I don't like	1	2	3	4	5

Appendix C – Study 3

Self-Affirmation Manipulation – Phase 1

Below is a list of characteristics and values, some of which may be important to you, some of which may be unimportant. Please rank these values and qualities in order of their importance to you, from 1-13 (1 = most important item, 13 = least important item). Use each number only once.

- _____ Artistic skills/aesthetic appreciation
- _____ Sense of humor
- _____ Relationships with friends/family
- _____ Spontaneity/living life in the moment
- _____ Social skills
- _____ Athletics
- _____ Musical ability/appreciation
- _____ Physical attractiveness
- _____ Creativity
- _____ Academic skills
- _____ Romance
- _____ Religion
- _____ Other (please list: _____)

Phase 2 - Self-Affirmation Condition

Consider your top ranked value (the value *most* important to you – ranked number 1).

- Describe why this value is important to you and how it has made you feel good about yourself.

Phase 2 – Control Condition

Consider your bottom ranked value (the value *least* important to you – ranked number 12).

- Describe why you think this value might be important to somebody else.

Manipulation Check

Rate how much you agree with the following statement from 1 (not at all) to 7 (extremely).

1) The value I wrote about is very important to me.

Not at all important						Extremely important
1	2	3	4	5	6	7

References

- Akin, U., & Akin, A. (2015). Examining the predictive role of self-compassion on sense of community in Turkish adolescents. *Social Indicators Research*, 123, 1, 29-38.
- Alden, L. E., Taylor, C. T., Mellings, T. M., & Laposa, J. M. (2008). Social anxiety and the interpretation of positive social events. *Journal of Anxiety Disorders*, 22(4), 577-590.
- Alden, L. E. & Wallace, S. T. (1995). Social phobia and social appraisal in successful and unsuccessful social interactions. *Behaviour Research and Therapy*, 33, 497-505.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders*, 5th ed. Arlington: American Psychiatric Association.
- Arch, J. J., Brown, K. W., Dean, D. J., Landy, L. N., Brown, K. D., & Laudenslager, M. L. (2014). Self-compassion training modulates alpha-amylase, heart rate variability, and subjective responses to social evaluative threat in women. *Psychoneuroendocrinology*, 42, 49-58.
- Arch, J. J., Landy, L. N., Schneider, R. L., Koban, L., & Andrews-Hanna, J. R. (2018). Self-compassion induction enhances recovery from social stressors: Comparing adults with social anxiety disorder and healthy controls. *Anxiety, Stress, & Coping*. 1477-2205.
- Arch, J. J., Mitchell, J. L., Genung, S. R., Fisher, R., Andorsky, D. J., & Stanton, A. L. (2019). A randomized controlled trial of a group acceptance-based intervention for cancer survivors experiencing anxiety at re-entry ('Valued Living'): Study protocol. *BMC Cancer*, 19 (1), p. NA

- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. <http://doi.org/10.1176/appi.books.9780890425596>
- Akin, A. (2008). Self-compassion and achievement goals: A structural equation modeling approach. *Egitim Arastirmalari-Eurasian Journal of Educational Research, 31*, 1-15.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13 (1)*, 27-45.
- Bahraini, N. H., Devore, M. D., Monteith, L. L., Forster, J. E., Bensen, S., & Brenner, L. A. (2013). The role of value importance and success in understanding suicidal ideation among veterans. *Journal of Contextual Behavioral Science, 2*, 31-38.
- Bardi, A., & Schwartz, S.H., 2003. Values and behavior: Strength and structure of relations. *Personality and Social Psychology Bulletin, 29*, 1207-1220.
- Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualization, correlates, & interventions. *Review of General Psychology, 15(4)*, 289-303.
- Baxter, A.J., Scott, K.M., Vos, T., Whiteford, H.A. (2013). Global prevalence of anxiety disorders: a systematic review and meta-regression. *Psychological Medicine, 43*, 897-910.
- Beedso-Baum, K., Knappe, S., Fehm, L., Hofler, M., Lieb, R., Hofmann, S. G., & Wittchen, H-U. (2012). The natural course of social anxiety disorder among adolescents and young adults. *Acta Psychiatry Scandinavia, 126 (6)*, 411-25.
- Beesdo, K., Bittner, A., Pine, D. S., Stein, M. B., Hofler, M., Lieb, R., & Wittchen, H. U. (2007). Incidence of social anxiety disorder and the consistent risk for secondary

- depression in the first three decades of life. *Archives of General Psychiatry*, 64 (8), 903-912.
- Berghoff, C. R., Forsyth, J. P., Ritzert, T. R., Eifert, G. H., & Anderson, D. A. (2017). Evaluation of the contribution of values clarification to a brief mindfulness meditation intervention for anxiety. *Journal of Clinical Psychology*, 74, 1387-1402.
- Blackie, R. A. & Kocovski, N. L. (2017). Examining the relationships among self-compassion, social anxiety, and post-event processing. *Psychological Reports*, 121, (4), 669-681.
- Bogels, S. M., Sijbers, G. F. V. M., & Voncken, M. (2006). Mindfulness and task concentration training for social phobia: A pilot study. *Journal of Cognitive Psychotherapy*, 20, 33-44.
- Branstetter-Rost, A., Cushing, C., & Douleh, T. (2009). Personal values and pain tolerance: Does a values intervention add to acceptance? *The Journal of Pain*, 10, 887-892.
- Breines, J. & Chen, S. (2012). Self-compassion increases self-improvement motivation. *Personality and Social Psychology Bulletin*, 38, 1133-1143.
- Brozovich, F. & Heimberg, R. G. (2008). An analysis of post-event processing in social anxiety disorder. *Clinical Psychology Review*, 28, 891-903.
- Bruce, S. E., Yonkers, K. A., Otto, M. W., Eisen, J. L., Weisberg, R. B., Pagano, M., Shea, M. T., & Keller, M. B. (2005). Influence of psychiatric comorbidity on recovery and recurrence in generalized anxiety disorder, social phobia, and panic disorder: a 12-year prospective study. *American Journal of Psychiatry*, 162, 1179-1187.
- Bucchianeri, M. M. & Corning, A. F. (2012). An experimental test of women's body dissatisfaction reduction through self-affirmation. *Applied Psychology: Healthy and*

Well-Being, 4 (2), 188-201.

Chartier, M. J., Walker, J. R., & Stein, M. B. (2003). Considering comorbidity in social phobia. *Social Psychiatry Psychiatric Epidemiology*, 38, 728-734.

Chase, J. A., Houmanfar, R., Hayes, S. C., Ward, T. A., Vilardaga, J. P., & Follette, V. (2013). Values are not just goals: Online ACT-based values training adds to goal setting in improving undergraduate college student performance. *Journal of Contextual Behavioral Science*, 2, 79-84.

Chen, K. W., Berger, C. C., Menheimer, E., Forde, D., Magidson, J., Dachman, L., & Lejuez, C. W. (2012). Meditative therapies for reducing anxiety: A systematic review and meta-analysis of randomized controlled trials. *Depression and Anxiety*, 29, 545-562.

Ciarrochi, J., Fisher, D., & Lane, L. (2011). The link between value motives, value success, and well-being among people diagnosed with cancer. *Psycho-Oncology*, 20, 1184-1192.

Clark, D. M. (2001). A cognitive perspective on social phobia. In W. R. Crozier, & L. E. Alden (Eds.), *International handbook of social anxiety: Concepts, research, and interventions relating to the self and shyness* (pp. 405-430). New York: John Wiley & sons.

Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 69-93). New York: Guilford Press.

Cohen, G. L., Aronson, J., & Steele, C. M. (2000). When beliefs yield to evidence:

- Reducing biased evaluation by affirming the self. *Personality and Social Psychology Bulletin*, 26, 1151-1164.
- Cohen, G. L., Garcia, J., Apfel, N., Master, A. (2006). Reducing the racial achievement gap: A social-psychological intervention. *Science*, 313, 1307-1310.
- Cohen, G. L., Garcia, J., Purdie-Vaughns, V., Apfel, N., Brzustoski, P. (2009). Recursive processes in self-affirmation: intervening to close the minority achievement gap. *Science*, 324, 400-403.
- Cohen, G. L., Sherman, D. K., Bastardi, A., Hsu, L., McGoey, M., & Ross, L. (2007). Bridging the partisan divide: Self-affirmation reduces ideological closed-mindedness and inflexibility in negotiation. *Journal of Personality and Social Psychology*, 93, 415-430.
- Cohen, G. L. & Sherman, D. K. (2014). The psychology of change: Self-affirmation and social psychological intervention. *Annual Review of Psychology*, 65, 333-371.
- Connor, K. M., Davidson, J. R. T., Churchill, L. E., Sherwood, A., Weisler, R. H., & Foa, E. (2000). Psychometric properties of the social phobia inventory (SPIN). *The British Journal of Psychiatry*, 176, 379-386.
- Cook, J. E., Purdie-Vaughans, V., Garcia, J., Cohen, G. L. (2012). Chronic threat and contingent belonging: Protective benefits of values-affirmation on identity development. *Journal of Personality and Social Psychology*, 102, 479-496.
- Costa, J., & Pinto-Gouveia, J. (2013). Experiential avoidance and self-compassion in chronic pain. *Journal of Applied Social Psychology*, 43, 1578-1591.
- Cox, B. J., Fleet, C., Stein, M. B. (2004). Self-criticism and social phobia in the US national comorbidity survey. *Journal of Affective Disorders*, 82 (2), 227-234.

- Cox, B. J., Walker, J. R., Enns, M. W., & Karpinski, D. C. (2002). Self-criticism in generalized social phobia and response to cognitive-behavioural treatment. *Behavior Therapy, 33* (4), 479-491.
- Craske, M. G., Niles, A. N., Burklund, L. J., Wolitzky-Taylor, K. B., Vilaradaga, J. C. P., Arch, J. J., Saxbe, D. E., Lieberman, M. D., & Nezu, A. M. (2014). Randomized controlled trial of cognitive behavioral therapy and Acceptance and Commitment Therapy for social phobia: Outcomes and moderators. *Journal of Consulting and Clinical Psychology, 82*(6), 1034-1048.
- Creswell, J. D., Dutcher, J. M., Klein, W. M. P, Harris, P. R., & Levine, J. M. (2013). Self-affirmation improves problem-solving under stress. *PLoS ONE, 8* (5), e62593.
- Creswell, J. D., Lam, S., Stanton, A. L., Taylor, S. E., Bower, J. E., Sherman, D. K. (2007). Does self-affirmation, cognitive processing, or discovery of meaning explain cancer-related health benefits of expressive writing? *Personality and Social Psychology Bulletin, 33*, 238-250.
- Creswell, J. D., Welch, W., Taylor, S. E., Sherman, D. K., Gruenewald, T., & Mann, T. (2005). Affirmation of personal values buffers neuroendocrine and psychological stress responses. *Psychological Science, 16*, 846-851.
- Crocker, J, Niiya, Y, & Mischkowski, D. (2008). Why does writing about important values reduce defensiveness? Self-affirmation and the role of positive other-directed feelings. *Psychological science, 19* (7), 740-747.
- Cuijpers, P., Cristea, I. A., Karyotaki, E., Reijnders, M., & Huibers, M. J. (2016). How effective are cognitive behavior therapies for major depression and anxiety disorders? A meta-analytic update of the evidence. *World Psychiatry, 15*, 245-258.

- Cuijpers, P., Sijbrandij, M., Koole, S., Huibers, M., Berking, M., & Andersson, G. (2014). Psychological treatment of generalized anxiety disorder: A meta-analysis. *Clinical Psychology Review, 34*, 130-140.
- Czech, S. K., Katz, A. M., & Orsillo, S. M. (2011). The effect of values-affirmation on psychological stress. *Cognitive Behaviour Therapy, 40*, 304-312.
- Daeho, K., Hwallip, B., Yong, C. P. (2008). Validity of the Subjective Units of Disturbance Scale in EMDR. *Journal of EMDR Practice and Research, 2*(1), 57-62.
- Dalrymple, K. L., & Herbert, J. D. (2007). Acceptance and Commitment Therapy for generalized social anxiety disorder: a pilot study. *Behavior Modification, 31*, 543-568.
- Dundas, I., Binder, P., Hansen, T. G. B., & Stige, S. H. (2017). Does a short self-compassion intervention for students increase self-regulation? A randomized control trial. *Scandinavian Journal of Psychology, 58*, 443-450.
- Eifert, G. H., & Forsyth, J. P. (2005). *Acceptance and Commitment Therapy for anxiety disorders: A practitioner's treatment guide to using mindfulness, acceptance, and values-based behavior change strategies*. Oakland, CA: New Harbinger.
- Eifert, G. H., Forsyth, J. P., Arch, J., Espejo, E., Keller, M., & Langer, D. (2009). Acceptance and Commitment Therapy for anxiety disorders: Three case studies exemplifying a unified treatment protocol. *Cognitive and Behavioral Practice, 16*, 368-385.
- Epton, T., Harris, P., Kane, R., van Koningsbruggen, G. & Sheeran, P. (2015). The impact of self-affirmation on health-behavior change: A meta-analysis. *Health Psychology,*

34(3), pp.187-196.

- Erwin, B. A., Heimburg, R. G., Marx B. P., & Franklin, M. E. (2006). Traumatic and socially stressful life events among persons with social anxiety disorder. *Anxiety Disorders, 20*, 896-914.
- Eskildsen, A., Hougaard, E., & Rosenberg, N. K. (2010). Pre-treatment patient variables as predictors of drop-out and treatment outcome in cognitive behavioural therapy for social phobia: A systematic review. *Nordic Journal of Psychiatry, 64*, 94–105.
- Ferrer, R. A., Klein, W. M. P., & Graff, K. A. (2017). Self-affirmation increases defensiveness toward health risk information among those experiencing negative emotions: Results from two national samples. *Health Psychology, 36* (4), 380-391.
- Fleming, J. E. & Kocovski, N. L. (2013). *The mindfulness & acceptance workbook for social anxiety & shyness: using Acceptance and Commitment Therapy to free yourself from fear & reclaim your life*. Oakland, CA: New Harbinger Publications Inc.
- Flett, G. L., Coulter, L-M, & Hewitt, P. L. (2012). The perfectionistic self-presentation scale-junior form: Psychometric properties and association with social anxiety in early adolescents. *Canadian Journal of School Psychology, 27* (2), 136-149.
- Freijy, T. & Kothe, E. (2013). Dissonance-based interventions for health behaviour change: A systematic review. *British Journal of Health Psychology, 18*(2), pp.310-337.
- Goldin, P., Ramel, W., & Gross, J. (2009). Mindfulness meditation training and self-referential processing in social anxiety disorder: behavioral and neural effects. *Journal of Cognitive Psychotherapy, 23*, 242-257.
- Green, D. C. & Britton, P. J. (2015). Predicting adult LGBTQ happiness: Impact of

- childhood affirmation, self-compassion, and personal mastery. *Journal of LGBT Issues in Counseling*, 9 (3), 158-179.
- Grumet, R. & Fitzpatrick, M. (2016). A case of integrating values clarification work into cognitive behavioural therapy for social anxiety disorder. *Journal of Psychotherapy Integration*, 26 (1), 11-21.
- Gutierrez, O., Luciano, C., Rodriguez, M., & Fink, B. C. (2004). Comparison between an acceptance-based and a cognitive-control-based protocol for coping with pain. *Behavior Therapy*, 35, 767-783.
- Harris, P. R., & Epton, T. (2009). The impact of self-affirmation on health behaviour and other health-related responses: A narrative review. *Social and Personality Psychology Compass*, 3, 962-978.
- Harris, P. R., & Napper, L. (2005). Self-affirmation and the biased processing of threatening health-risk information. *Personality and Social Psychology Bulletin*, 31, 1250-1263.
- Harwood, E. & Kocovski, N. (2017). Self-compassion induction reduces anticipatory anxiety among socially anxious students. *Mindfulness*, 8 (6), 1544-1551.
- Hayes, S. C. (2004). Acceptance and Commitment Therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy*, 35, 639-665.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. The Guilford Press.
- Hayes, S., Barnes-Holmes, D. & Roche, B. (2001). *Relational frame theory: A post-Skinnerian account of human language and cognition*. Nueva York: Kluwer

Academic.

- Hayes, S. C. & Duckworth, M. P. (2006). Acceptance and Commitment Therapy and traditional cognitive behavior therapy approaches to pain. *Cognitive and Behavioral Practice, 13*, 185-187.
- Hayes, S. C., Strosahl, K. D., Bunting, K., Twohig, M., & Wilson, K. G. (2004). What is Acceptance and Commitment Therapy? In S. C. Hayes & K. D. Strosahl (Eds.), *A practical guide to acceptance and commitment therapy* (p. 1-30). New York: Springer.
- Hayes, S. C., Strosahl, K., & Wilson, K. G. (1999). Acceptance and Commitment Therapy: An experimental approach to behavior change. New York: Guilford Press.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy, second edition: The process and practice of mindful change*. New York: The Guilford Press.
- Hayes, S., Villatte, M., Levin, M. & Hildebrandt, M. (2011). Open, aware, and active: Contextual approaches as an emerging trend in the behavioral and cognitive therapies. *Annual Review of Clinical Psychology, 7*(1), pp.141-168.
- Heffernan, M., Quinn, M. T., McNulty, S. R., et al. (2010). Self-compassion and emotional intelligence in nurses. *International Journal of Nursing Practice, 16* (4), 366-373.
- Helbig-Lang, S., von Auer, M., Neubauer, K., Murray, E., & Gerlach, A. L. (2016). Post-event processing in social anxiety disorder after real-life social situations: An ambulatory assessment study. *Behaviour Research and Therapy, 84*, 27-34.
- Henning, E. R., Turk, C. L., Mennin, D. S., Fresco, D. M., & Heimberg, R. G. (2007).

- Impairment and quality of life in individuals with generalized anxiety disorder. *Depression and anxiety*, 24, 342-349.
- Herbert, J. D., Gershkovich, M., & Forman, E. M. (2014). *Acceptance and mindfulness-based therapies for social anxiety disorder: Current findings and future directions*. In J. W. Weeks (Ed.), *The Wiley Blackwell handbook of social anxiety disorder* (p.588-607). Wiley Blackwell.
- Hertel, P. T., Brozovich, F., Joormann, J., Gotlib, I. H., & Watson, D. (2008). Biases in interpretation and memory in generalized social phobia. *Journal of Abnormal Psychology*, 117 (2), 278-288.
- Hinrichsen, H., & Clark, D. M. (2003). Anticipatory processing in social anxiety: Two pilot studies. *Journal of Behavior Therapy and Experimental Psychiatry*, 34, 205–218.
- Hofmann, S. G. (2007). Cognitive factors that maintain social anxiety disorder: A comprehensive model and its treatment implications. *Cognitive Behaviour Therapy*, 36(4), 193-209.
- Ivanova, E., Lindner, P., Ly, K., Dahlin, M., Vernmark, K., Andersson, G. & Carlbring, P. (2016). Guided and unguided Acceptance and Commitment Therapy for social anxiety disorder and/or panic disorder provided via the Internet and a smartphone application: A randomized controlled trial. *Journal of Anxiety Disorders*, 44, pp.27-35.
- Jessop, D. C., Ayers, S., Burn, F., Ryda, C. (2018). Can self-affirmation exacerbate adverse reactions to stress under certain conditions? *Psychology & Health*, 33 (7), 827-845.
- Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to*

face stress, pain, and illness. New York: Random House.

- Kaczurkin, A. N. (2015). Cognitive-behavioral therapy for anxiety disorders: an update on the empirical evidence. *Dialogues in Clinical Neuroscience*, 17 (3), 337-346
- Kaplan, D. M., & Smith, T. (1995). A validity study of the Subjective Unit of Distress (SUD) score. *Measurement & Evaluation in Counselling*, 27(4), 195.
- Karremans, J. C. (2007). Considering reasons for a value influences behavior that expresses related values: An extension of the value-as-truisms hypothesis. *European Journal of Social Psychology*, 37, 508-523.
- Kashdan, T. B., Farmer, A. S., Adams, L. M., Ferssizidis, P., McKnight, P. E., & Nezlek, J. B. (2013). Distinguishing healthy adults from people with social anxiety disorder: Evidence for the value of experiential avoidance and positive emotions in everyday social interactions. *Journal of Abnormal Psychology*, 122(3), 645–655.
- Kashdan, T. B., & McKnight, P. E. (2013). Commitment to a purpose in life: An antidote to the suffering by individuals with social anxiety disorder. *Emotion*, 13, 1150 – 1159.
- Keller, M. B. (2003). The lifelong course of social anxiety disorder: A clinical perspective. *Acta Psychiatrica Scandinavica*, 108, 85-94.
- Keng, S-L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical Psychology*, 31 (6), 1041-1056.
- Keough, K. A. & Markus, H. R. (1998). The role of the self in building the bridge from philosophy to biology. *Psychology Inquiry*, 9, 49-53.
- Kessler, R. C. (2003). The impairments caused by social phobia in the general population: implications for intervention. *Acta Psychiatrica Scandinavica*, 108 (417), 19-27.

- Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Chatterji, S., Lee, S., Ormel, J., ... Wang, P. S. (2009). The global burden of mental disorder: An update from the WHO World Mental Health (WMH) Surveys. *Epidemiologiae Psichiatria Sociale*, 18, 23-33.
- Kessler, R. C., Chiu, W. T., Demler, O., Merikangas, K. R., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 617-627.
- Kessler, R. C., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Wittchen, H. U. (2012). Twelve-month and lifetime prevalence and life-time morbid risk of anxiety and mood disorders in the United States. *International Journal of Methods in Psychiatric Research*, 21, 169-184.
- Khoury, B., Lecomte, T., Fortin, G., Masse, M., Therien, P., Bouchard, V., & Hofmann, S. G. (2013). Mindfulness-based therapy: A comprehensive meta-analysis. *Clinical Psychology Review*, 33, 763-771.
- Klein, W. M. P., Harris, P. R., Ferrer, R. A., & Zajac, L. E. (2011). Affective perceptions of vulnerability in response to threatening messages: Effects of self-affirmation. *Journal of Experimental Social Psychology*, 47, 1237-1242.
- Kocovski, N. L., Fleming, J. E., Hawley, L.L., Huta, V., & Anthony, M. M. (2013). Mindfulness and acceptance-based group therapy versus traditional cognitive behavioral group therapy for social anxiety disorder: A randomized controlled trial. *Behaviour Research and Therapy*, 51, 889-898.
- Kocovski, N. L., Fleming, J. E., Blackie, R. A., Mackenzie, M. B., & Rose, A. L. (2019). Self-help for social anxiety: Randomized controlled trial comparing a mindfulness

- and acceptance-based approach with a control group. *Behavior Therapy*, 50, 696-709.
- Kudielka, B. M., Wuřt, S., Kirschbaum, C., & Hellhammer, D. H. (2007). Trier social stress test (pp. 776–781). London: Academic Press.
- Lannin, D., Vogel, D., Kahn, J., Brenner, R., Heath, P., & Guyll, M. (2018). A multi-wave test of self-affirmation versus emotionally expressive writing. *Counselling Psychology Quarterly*, 33(3), 333-351.
- Leary, M. R., Tate, E. N., Adams, C. E., Batts, A. A., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology*, 92, 887-904.
- Ledley, D. R., Erwin, B. A., & Heimberg, R. G. (2008). Social anxiety disorder. *Psychopathology: History, diagnosis, and empirical foundations*. (Craighead, W. E., Miklowitz, D. J., & Craighead, L. W, Eds.). Wiley-Blackwell; New York.
- Lehmiller, J. J., Law, A. T., & Tormala, T. T. (2010). The effect of self-affirmation on sexual prejudice. *Journal of Experimental Social Psychology*, 46, 276-285.
- Leichsenring, F., Jaeger, U., Rabung, S., & Streek, U. (2003). Social fears and mental disorders. *Psychotherapie im Dialog*, 4, 68-74.
- Liebowitz, M. R., Gorman, J. M., Fyer, A. J., & Klein, D. F. (1985). Social phobia: Review of a neglected anxiety disorder. *Archive of General Psychiatry*, 42, 729-736.
- Lindsay, E. K. & Creswell, J. D. (2014). Helping the self help others: Self-affirmation increases self-compassion and pro-social behaviors. *Frontiers in Psychology*, 5.
- Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*.

New York: The Guilford Press.

Maio, G. R., Olson, J. M., Allen, L., & Bernard, M. M. (2001). Addressing discrepancies between values and behavior: The motivating effect of reasons. *Journal of Experimental Social Psychology*, 37, 104-117.

Mattick, R. P., & Clarke, J. C. (1998) Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. *Behaviour Research and Therapy*, 36, 455 -470.

McAleavey, A. A., Castonguay, L. G., & Goldfried, M. R. (2014). Clinical experiences in conducting cognitive-behavioral therapy for social phobia. *Behavior Therapy*, 45, 21–35.

McQueen, A., & Klein, W. M. (2006). Experimental manipulations of self-affirmation: A systematic review. *Self-Identity*, 5, 289-354.

Meier, E., Miller, M., Lechner, W. V., Lombardi, N., Clarborn, K. R., Leffingwell, T. R. (2015). The inability of self-affirmations to decrease defensive bias toward an alcohol-related risk message among high-risk college students. *Journal of American College Health*, 63 (5), 324-330.

Merrit, O. A., & Purdon, C. L. (2020). Scared of compassion: Fear of compassion in anxiety, mood, and non-clinical groups. *British Journal of Clinical Psychology*, 59 (3), 354-368.

Michelson, S. E., Lee, J. K., Orsillo, S. M., & Roemer, L. (2011). The role of values-consistent behavior in generalized anxiety disorder. *Depression and Anxiety*, 28, 358–366.

Mills, A. C., Grant, D. M., Lechner, W. V., & Judah, M. R. (2013). Psychometric

- properties of the Anticipatory Social Behaviours Questionnaire. *Journal of Psychopathological Behaviours Assessment*, 35, 346-355.
- Moscovitch, D. A. (2009). What is the core fear in social phobia? A new model to facilitate individualized case conceptualization and treatment. *Cognitive and Behavioral Practice*, 16, 123-134.
- Moscovitch, D. A., Antony, M. M., & Swinson, R. P. (2009). Exposure-based treatments for anxiety disorders: Theory and process. In M. M. Antony, & M. B. Stein (Eds.), *Handbook of anxiety and anxiety disorders* New York: Oxford University Press.
- Mullaney, J. A., & Trippet, C. J. (1979). Alcohol dependence and phobias: Clinical description and relevance. *British Journal of Psychiatry*, 135, 565-573.
- Neff, K. D. (2003a). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223-250.
- Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2, 85-101.
- Neff, K. D. (2016). The self-compassion scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness*, 7, 264-274.
- Neff, K. D., Hsieh, Y., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity*, 4, 263-287.
- Neff, K. D., Toth-Kiraly, I., Knox, M. C., Kuchar, A., & Davidson, O. (2020). The development and validation of the state self-compassion scale (Long- and Short Form). *Mindfulness*, 12, 121-140.
- Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, 41, 139-154.

Neff, K. D., Long, P., Knox, M. C., Davidson, O., Kuchar, A., Costigan, A., et al. (2018).

The forest and the trees: Examining the association of self-compassion and its positive and negative components with psychological functioning. *Self and Identity*, 17 (6), 627-645.

Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality*, 41 (4), 908-916.

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality*, 77, 23-50.

Nepon, T., Flett, G. L., Hewitt, P. L., & Molnar, D. S. (2011). Perfectionism, negative social feedback, and interpersonal rumination in depression and social anxiety. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement*, 43 (4), 297.

Norton, A. R., Abbott, M. J., Norberg, M. M., & Hunt, C. (2015). A systematic review of mindfulness and acceptance-based treatments for social anxiety disorder. *Journal of Clinical Psychology*, 71, 4, 283-301.

Olatunji, B. O., Cisler, J. M., & Tolin, D. F. (2007). Quality of life in the anxiety disorders: A meta-analytic review. *Clinical Psychology Review*, 27, 572-581.

Ossman, W., Wilson, K., Storaasli, R. & McNeill, J., 2006. A preliminary investigation of the use of Acceptance and Commitment Therapy in group treatment for social phobia. *International Journal of Psychology and Psychological Therapy*, 6(3), pp.397-416.

Otte, C. Cognitive behavioral therapy in anxiety disorders: current state of the evidence.

Dialogues in Clinical Neuroscience, 13, 4, 413-421.

- Páez-Blarrina, M., Luciano, C., Guiérrez, O., Valdivia, S., Ortega, J., & Rodriguez-Valverde, M. (2008). The role of values with personal examples in altering the functions of pain: Comparison between acceptance-based and cognitive-control-based protocols. *Behaviour Research and Therapy*, 46(1), 84-97.
- Páez-Blarrina, M., Luciano, C., Guiérrez, O., Valdivia, S., Rodriguez, M., & Ortega, J. (2008). Coping with pain in the motivational context of values: Comparison between an acceptance-based and a cognitive control-based protocol. *Behavior Modification*, 32(3), 403-422.
- Páez-Blarrina, M., Luciano, C., Guiérrez, O., Valdivia, S., Rodriguez, M., Ortega, J., & Rodriguez-Valverde, M. (2008). The role of values with personal example in altering the functions of pain: Comparison between an acceptance-based and a cognitive control-based protocol. *Behavior Research and Therapy*, 46(1), 84-97.
- Pennebaker, J. W. (2004). *Writing to heal: A guided journal for recovering from trauma and emotional upheaval*. Oakland, CA: New Harbinger Press.
- Pickert, K. (2014). The mindful revolution. Time Magazine. Retrieved from <http://time.com/1556/the-mindful-revolution/>
- Pratto, F., & John, O. P. (1991). Automatic vigilance: The attention-grabbing power of negative social information. *Journal of Personality and Social Psychology*, 61, 380-391.
- Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology & Psychotherapy*, 18, 250-255.

- Ranta, K., Kaltiala-Heino, R., Rantanen, P., & Marttunen, M. (2009). Social phobia in Finnish general adolescent population: Prevalence, comorbidity, individual and family correlates, and service use. *Depression and Anxiety*, 26, 528-536.
- Rector, N. A., Bagby, R. M., Segal, Z., et al. (2000). Self-criticism and dependency in depressed patients treated with cognitive therapy or pharmacotherapy. *Cognitive Therapy Research*, 24 (5), 571-584.
- Rodebaugh, T., Haloway, R., & Heimberg, R. (2004). The treatment of social anxiety disorder. *Clinical Psychology Review*, 24, 883-908.
- Roemer, L., Orsillo, S. M., & Salters-Pedneault, K. (2008). Efficacy of an acceptance-based behavior therapy for generalized social anxiety disorder: Evaluation in a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 76, 1083-1089.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.
- Ruiz, F. J. (2010). A review of Acceptance and Commitment Therapy (ACT) empirical evidence: Correlational, experimental psychopathology, component and outcome studies. *International Journal of Psychology and Psychological Therapy*, 10(1), 125-162.
- Ruiz, F. J. (2012). Acceptance and Commitment Therapy versus traditional cognitive behavioral therapy: A systematic review and meta-analysis of current empirical evidence. *International Journal of Psychology and Psychological Therapy*, 12(3), 333-358.
- Ruscio, A. M., Brown, T. A., Chiu, W. T., Sareen, J., Stein, M. B., & Kessler, R. C. (2008) Social fears and social phobia in the USA: Results from the National Comorbidity

- Survey Replication. *Psychological Medicine*, 38 (1), 15-28.
- Sagiv, L., Sverdlik, N., & Schwarz, N. (2011). To compete or to cooperate? Values' impact on perception and action in social dilemma games. *European Journal of Social Psychology*, 41, 64-77.
- Schmeichel, B. J., & Martens, A. (2005). Self-affirmation and mortality salience: Affirming values reduces worldview defense and death-thought accessibility. *Personality and Social Psychology Bulletin*, 31, 658-667.
- Schmeichel, B. J. & Vohs, K. (2009). Self-affirmation and self-control: Affirming core values counteracts ego depletion. *Journal of Personality and Social Psychology*, 96, 770-782.
- Schneier, F. R., Johnson, J., Hornig, C. D., Liebowitz, M. R., & Weissman, M. M. (1992). Social phobia: Comorbidity and morbidity in an epidemiologic sample. *Archives of General Psychiatry*, 49, 282-288.
- Scholer, A. A., Higgins, E. T., & Ryan, R. M. (2012). *The oxford handbook of human motivation*. Oxford University Press.
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to pre-venting relapse*. New York: The Guilford Press.
- Serpa, J. G., Taylor, S. L., & Tillisch, K. (2014). Mindfulness-based stress reduction (MBSR) reduces anxiety, depression, and suicidal ideation in veterans. *Medical Care*, 52 (12), s19-s24.
- Sheldon, K. M., & Houser-Marko, L. (2001). Self-concordance, goal attainment, and the pursuit of happiness: Can there be an upward spiral? *Journal of Personality and*

Social Psychology, 80, 152-165.

Sherman, D. K. & Cohen, G. L. (2006). The psychology of self-defense: Self-affirmation theory. *Advances in Experimental Social Psychology*, 38. DOI: 10.1016/S0065-2601(06)38004-5.

Sherman, D. K., & Harson, K. A. (2011). "Reconciling self-protection with self-improvement," in *Self-Affirmation Theory*, eds. M. Alicke and C. Sedikides (New York, NY: Guilford Press).

Sherman, D. K., Harson, K. A., Binning, K. R., Purdie-Vaughns, V., Garcia, J., et al. (2013). Deflecting the trajectory and changing the narrative: How self-affirmation affects academic performance and motivation under identity threat. *Journal of Personality and Social Psychology*, 104, 591, 618.

Sherman, D. K., & Kim, H. S. (2005). Is there an "I" in "team"? The role of the self in group-serving judgments. *Journal of Personality and Social Psychology*, 88, 108-120.

Shnabel, N., Purdie-Vaughns, V., Cook, J. E., Garcia, J., Cohen, G. L. (2013). Demystifying values-affirmation interventions: writing about social belonging is a key to buffering against identity threat. *Personality and Social Psychology Bulletin*, 39, 663-676.

Smyth, J. M., & Pennebaker, J. W. (2008). Exploring the boundary conditions of expressive writing: In search of the right recipe. *British Journal of Health Psychology*, 13 (1), 1-7.

Spielberger, C. D., Gorsuch, R.L., and Lushene, R.E. (1970). Manual for the State-Trait Anxiety Inventory. Palo Alto, CA: Consulting Psychologists Press.

Spielberger, C. D., Gorsuch, T. L., Lushene, R., Vagg, P.R., & Jacobs, G.A. (1983).

Manual for the state-trait anxiety inventory. Palo, Alto, CA: Consulting

Psychologists Press.

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the

self. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 261-302). New York: Academic Press.

Stefan, C. (2019). Self-compassion as mediator between coping and social anxiety in late adolescence: A longitudinal analysis. *Journal of Adolescence*, 76, 120-128.

Stefan, C., Capraru, C., & Szilagyi, M. (2018). Investigating effects and mechanisms of a mindfulness-based stress reduction intervention in a sample of college students at risk for social anxiety. *Mindfulness*, 9 (5), 1509-1521.

Stein, M. B. & Kean, Y. M. (2000). Disability and quality of life in social phobia:

Epidemiologic findings. *American Journal of Psychiatry*, 157 (10), 1606-1613.

Stapel, D. A. & van der Linde, L. A. (2011). What drives self-affirmation effects? On the importance of differentiating value affirmation and attribute affirmation. *Journal of Personality and Social Psychology*, 101 (1), 34-45.

Strauss, C., Cavanagh, K., Oliver, A., & Pettman, D. (2014). Mindfulness-based interventions for people diagnosed with a current episode of an anxiety or depressive disorder: A meta-analysis of randomized controlled trials. *PLoS ONE*, 9 (4), e96110.

Swain, J., Hancock, K., Hainsworth, C., & Bowman, J. (2013). Acceptance and commitment therapy in the treatment of anxiety: A systematic review. *Clinical Psychology Review*, 33(8), 965-978.

- Taylor, S., Abramowitz, J. S., & McKay, D. (2012). Non-adherence and non-response in the treatment of anxiety disorders. *Journal of Anxiety Disorders*, 26, 583-589.
- Tesser, A. (2000). On the confluence of self-esteem maintenance mechanisms. *Personality and Social Psychology Review*, 4, 290-299.
- Tull, M. T., Berghoff, C. R., Bardeen, J. R., Schoenleber, M., & Konkle-Parker, D. J. (2018). An initial open-trial of a brief behavioral activation treatment for depression and medication adherence in HIV-infected patients. *Behavior Modification*, 42, 196–209.
- Vohs, K. D., Park, J. K., & Schmeichel, B. J. (2013). Self-affirmation can enable goal disengagement. *Journal of Personality and Social Psychology*, 104, 14-27.
- Wakslak, C. J. & Trope, Y. (2009). Cognitive consequences of affirming the self: The relationship between self-affirmation and object construal. *Journal of Experimental Social Psychology*, 45, 927-932.
- Waring, S. V., & Kelly, A. C. (2019). Trait self-compassion predicts different responses to failure depending on the interpersonal context. *Personality and Individual Differences*, 143 (1), 47-54.
- Weeks, J. W., & Heimberg, R. G. (2012). Positivity impairments: Pervasive and impairing (yet non-prominent?) features of social anxiety disorder. *Cognitive Behaviour Therapy*, 41, 79–82.
- Weiller, E., Bissierbe, J. C., Boyer, P., Lepine, J. P., & Lecribier, Y. (1996). Social phobia in general health care: An unrecognized undertreated disabling disorder. *British Journal of Psychiatry*, 168, 169-174.
- Weisenfeld, B. M., Brockner, J., & Martin, C. (1999). A self-affirmation analysis of

- survivors' reactions to unfair organizational downsizings. *Journal of Experimental Social Psychology*, 35, 441-460.
- West, L. M., Graham, J. R., & Roemer, L. (2013). Functioning in the face of racism: Preliminary findings on the buffering role of values clarification in a black American sample. *Journal of Contextual Behavioral Science*, 2, 1-8.
- Williams, J. M. G. (2010). Mindfulness and psychological process. *Emotion*, 10, 1-7.
- Wilson, T. D. (2011). *Redirect: The Surprising New Science of Psychological Change*. New York: Little, Brown.
- Wilson, K. G., Sandoz, E. K., Kitchens, J., & Roberts, M. (2010). The valued living questionnaire: Defining and measuring valued action within a behavioral framework. *The Psychological Record*, 60, 249-272.
- Wolpe, J. (1969). *The practice of behaviour therapy* (2nd ed.). New York: Pergamon Press.
- Yadavia, J. E., & Hayes, S. C. (2009). Values in Acceptance and Commitment Therapy: A comparison with four other approaches. *Hellenic Journal of Psychology*, 6, 244-272.
- Zao, X., Peterson, E. B., Kim, W., & Rolfe-Redding, J. (2014). Effects of self-affirmation on daily versus occasional smokers' responses to graphic warning labels. *Communication Research*, 41, 1137-1158.
- Zao, X., & Nan, X. (2010). Influence of self-affirmation on responses to gain- versus loss-framed antismoking messages. *Human Communication Research*, 36 (4), 493-511.
- Zeller, M., Yuval, K., Nitzan-Assayag, Y., & Bernstein, A. (2014). Self-compassion in recovery following potentially traumatic stress: Longitudinal study of at-risk

youth. *Journal of Abnormal Child Psychology*, 43(4), 645–653